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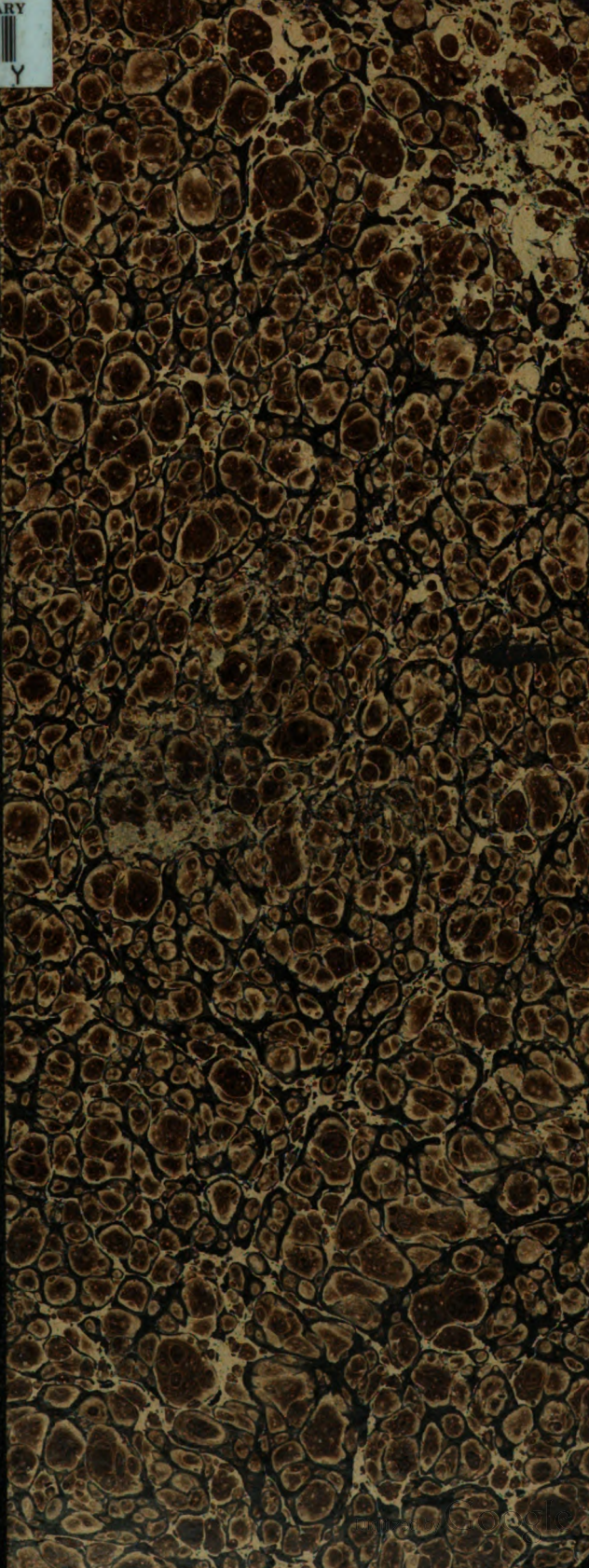
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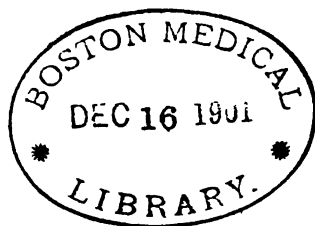
MEDICINE AND SURGERY.

C. S. BRIGGS, A.M., M.D.,
EDITOR AND PROPRIETOR.

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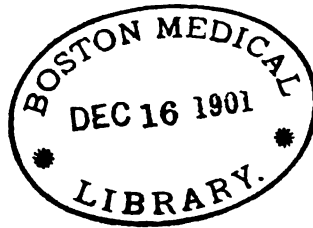
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MEDICINE AND SURGERY.

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Selected Articles.

APPENDICITIS*.

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Assistant Professor of Clinical Surgery in Harvard University; Surgeon
to the Massachusetts General Hospital.

[This article appeals to us of such great value that we take pleasure
in reproducing it for the benefit of our readers, though it crowds on
original matter.—ED.]

I. "Should every case be operated upon as soon as the di-
agnosis of appendicitis is made?"

II. "Should the appendix be removed in every case?"

SUMMARY.

I. Should every case be operated upon as soon as the di-
agnosis is made?

*Reprinted from the *Amer. Jour. of the Medical Sciences*, for Decem-
ber, 1899.

As a rule, the appendix should be removed if the diagnosis is made in the first hours of the attack.

After the early hours operation is advisable:

1. If the symptoms are severe, and especially if they are increasing in severity.
2. If the symptoms, after marked improvement, recur.
3. If the symptoms, though moderate, do not improve.

The wisdom of the operation is questionable:

1. In severe cases in which an extensive peritonitis is successfully localized and the patient is improving.
2. In cases which are at a critical stage, and which cannot undergo the slightest shock.

II. Should the appendix be removed in every case?

It should not be removed :

1. In localized abscesses with firm walls.
2. When the patient's strength does not permit prolonged search.

It should be removed whenever the peritoneal cavity is opened, unless the patient's condition forbids.

The appendix should be removed in all cases as soon as the inflammatory process has had time completely to subside—in from two to three months after the attack. In cases simply drained, the scar tissue should be excised, the appendix removed, and the wound securely sutured.

The present communication I offer with much hesitation, because I can contribute so little that is new to the discussion of appendicitis; yet it may seem, perhaps, not uninteresting to present this subject in the shape which it has gradually taken in my mind after observing a large number of cases.

The questions for consideration are all surgical, and the surgeon should in every case be given the earliest opportunity for deciding them. Appendicitis is a surgical disease; it should be admitted to surgical rather than to medical wards.

From month to month, from year to year, I find that my conclusions with reference to some of these questions change; that they depend for the time upon the point of view from which they are regarded, upon the class of cases met with, upon the results of treatment in my own cases, upon the ex-

periences of others; that at times no course of treatment seems too radical, at others, none too conservative. A series of nineteen consecutive deaths after operation in acute appendicitis (such an experience has occurred, it is said) may well suggest the query whether it were not better to abandon a hard and-fast rule to operate in every case, and to follow rather a policy of discrimination and selection. If it is said that such an unfortunate experience demands more strongly than ever that every case should be operated upon as soon as the diagnosis is made, it should be added, but only when the diagnosis is made early. On the other hand, it is asserted by some physicians that they have had no cases perish under palliative treatment, and hence no operation is ever necessary. Though my experience has never ranged between such extremes of absolute success and absolute failure, whatever my methods of treatment have been, I cannot but admit that a series of severe cases of appendicitis, in which there has been a large mortality after a comparatively early operation, has excited a strong doubt as to the wisdom of intervention in every case. The large percentage of recoveries in severe cases in which, for one reason or another, no operation has been performed adds to the doubt already excited. When, after a large experience, the surgeon is convinced that in some cases at least the operation adds the last straw, then it seems that possibly it is unwise to obey an invariable rule of procedure—that there may be some other course worth considering.

If all cases recovered after operation this question would be much simplified. There is a time for operation when practically all patients will recover; but there is also a time when many will die—when an unwise operation or an unwise palliation will be fatal. In many cases the choice of methods will influence, for good or for bad, the result. This, it seems to me, is the important point for discussion. If in every case of appendicitis we operate as soon as the diagnosis is made, we may operate at that very time, I contend, when the patient's best chance lies in conservatism.

In the discussion of appendicitis it must be borne in mind that we are speaking of cases which are pictured in words—

not cases under common observation at the bedside. What one may call a severe case, another may call a mild one; what one a hopeless, another only a serious case; what one a general peritonitis, another a simple serous exudate. Such a variation in the way of looking at things is the "personal equation" of the observer, and it cannot be estimated in a body of men who see nothing of each other's work. Among colleagues, however, all must admit that the personal equation is an important element, and that the severity of a case varies, when reduced to language, with the man. When speaking, therefore, of types of appendicitis, of illustrative cases of *severity, urgency, hopelessness*, and the like, we must bear in mind that, perhaps, we may not be speaking of exactly the same conditions; and that, though we may differ in the discussion of appendicitis here, at the bedside we very likely should be in perfect accord. The surgeons of the Massachusetts General Hospital, for example, though they may differ, perhaps, among themselves as to questions raised in this discussion as much as the members of this Association, actually at the bedside seldom, if ever, disagree as to the wisdom of operation. Even in the questions presented here there is rarely a strong divergence in opinion when it comes to the application of general principles to specific cases.

In the beginning, the operations for the removal of a perforated and gangrenous appendix were attended by such excessive mortality that the question of surgical intervention seemed extremely grave. To open the abdomen and remove such an appendix was to invite almost certain disaster, for it seemed almost impossible to avoid a general peritonitis. The natural result was to insist upon earlier operations. With earlier operations it was seen that the general infections and the mortality diminished, until it has been shown that practically all operations are successful if performed before the infectious process has reached the peritoneum. Such is the conclusion to which I, at least, have been forced by a considerable experience in the removal of such appendices. When the infectious process has reached the peritoneum, however, the prognosis, for reasons that will presently be given, is in many cases better under palliative treatment than under operative.

Furthermore, the interval operation certainly presents advantages which justify, in a certain class of cases, the risk of waiting.

I. The question as to operation in all cases as soon as the diagnosis is made depends upon the period of the disease; for the diagnosis may have been made on the first, second or third (or later) days. *Very early* in the disease means in the first twenty-four hours of it—at its very onset, when the symptoms are the most acute, the prognosis most uncertain. If at any time, it is at this time that the rule should be to intervene. With pain, vomiting, tenderness, abdominal rigidity and fever, the gravest crisis may be at hand. If the diagnosis of appendicitis is made now, the prognosis after operation is better than it would be a day or two later, when, perhaps, a general infection would have taken place. A positive diagnosis at this time, however, cannot always be made—the symptoms of a great variety of acute abdominal lesions begin in precisely the same way. Perforation of the stomach, acute cholecystitis, acute pancreatitis, mesenteric thrombosis and embolism, extravasation from the intestines, acute salpingitis, ovarian tumor with twisted pedicle, rupture of abscesses, acute intestinal obstruction, congenital malformation of the intestine, ruptured extra-uterine pregnancy—in fact, almost all acute abdominal lesions present symptoms that may suggest appendicitis as strongly as anything else; but so do acute intestinal disturbances dependent upon errors in diet—acute gastric and intestinal catarrhs, ptomaine poisoning, cholera morbus—or even lead colics.

As a rule, operation is advisable as soon as the diagnosis is made in those severe cases of acute appendicitis which are attended by the initial symptoms of peritoneal invasion—in other words, those seen in the early hours of the attack. Furthermore, this exploration is demanded under the conditions of peritoneal infection described above, even if the diagnosis of appendicitis is not made, because these symptoms demand intervention of themselves, whether an exact diagnosis is made or not.

On the other hand, it seems questionable whether one should open the abdomen at the onset of an appendicitis of

mild type, even if the diagnosis is reasonably clear; first, because the disease is often so mild, and its manifestations so trivial, that intervention can be justified only on the ground that a trivial attack is likely to become suddenly severe—an event which, as far as my experience goes, is extremely improbable. To this category of mild attacks belong the cases in which there is pain without nausea, vomiting, rigidity, or fever—attacks which subside with great rapidity and which call for intervention only when they recur so frequently as to produce disability—appendicular colics rather than true infections. Not that removal of the appendix in such cases is to be regarded as a serious matter—practically all the cases recover—but the lesion is not grave enough to justify even so safe a procedure as abdominal section until repeated recurrences demonstrate invalidism.

Cases might be introduced here to illustrate the practical difficulties that may arise and have arisen in the solution of these questions, the disasters that may attend the treatment of acute abdominal lesions—cases which apparently demanded operation, but in which operation proved unnecessary; cases treated medically that should have been operated upon, and cases justifying intervention that recovered rapidly without it. Yet the cases in which I have performed an unnecessary operation have been extremely few. The cases in which an unnecessary operation was performed had a fatal ending in but one. No cases occurred in which death followed delay excepting those desperate ones to be considered below, in which the condition was such that the patient did not seem to have the least chance of recovering except by the unaided—shall I say the *unimpeded*—efforts of nature.

Some years ago I made the statement (*American Journal of the Medical Sciences*, January, 1894) that the first symptoms of acute appendicitis were due to an extravasation from the appendix—an infection either gross and rapid, from the sudden giving way of the appendicular wall, or gradual, from an invasion of the peritoneum by diffusion—the result being a localized or a spreading peritonitis. Later experience has confirmed this view, though I have seen one or two sharp attacks of appendicitis in which there has been so

little peri-appendicitis that I have been able immediately to close the wound. In cases of severe type, beginning violently, there is always a perforation of the appendix or a localized infection. Early intervention in the trivial cases would doubtless show an infection limited to the interior of the appendix, and permitting immediate closure of the wound.

From the above general considerations it seems not unreasonable to conclude that if any rule is to be laid down as to surgical intervention it should be that in the very beginning of the disease severe cases require operation, because there is always a perforation, a gangrene, or an extra-appendicular infection; mild cases justify it because there is little danger, and because the wound can be closed. The mild cases will recover whether operated upon or not, so that the benefit of operation will apply only to the severe cases. Appendicitis, unfortunately, does not even now always come under observation in the earliest hours. The surgeon often sees the case for the first time on the second, third or fourth day, at a time when, it seems to me, the wisdom of universal intervention must be seriously questioned.

After the first twenty-four hours of an attack operation is advisable if the symptoms are severe, and especially if they are increasing in severity. At this time, if the attack continues in its original gravity, it may be concluded almost invariably that an escape of infectious material from the appendix has taken place, and that there is at least a localized peritonitis. Intervention at this time will show a swollen appendix, changed in consistence and in color, with patches of local necrosis, or even totally necrotic. The contiguous parts, whether meso-appendix, omentum, cæcum, small intestine, or iliac fossa, will be covered by an exudate and adherent to each other by easily separated finely granulated adhesions. At this period, though there may be feeble barriers against speedy infection, all operations necessarily involve the peritoneal cavity. There may be an actual hole in the appendix, even now, through which, varying in amount with the seat of the perforation and with the liquidity of the cæcal contents, intestinal or appendicular contents may be escaping. The appendix may, on the other hand, be perfectly intact,

even with severe symptoms, these symptoms depending upon absorption from the mucous membrane of the appendix itself. Such a condition, however, is, in my experience, extremely rare. As I say, once or twice only have I felt justified in closing the abdomen after the removal of such an appendix.

The peritoneal cavity at the time always contains free fluid—sometimes clear, sometimes turbid, sometimes foul, according to the extent and nature of the infection. This fluid, if sterile, is a most efficient culture medium, and it cannot but be infected in all operations upon the gangrenous or perforated appendix. Notwithstanding this danger the abdomen should be opened, as a rule, even on the second day if the symptoms are severe, and especially if they are increasing in severity, because of the liability of these fluids to become contaminated in spite of spontaneous efforts at localization. Symptoms at this stage are severe if pain continues unabated, with fever, right-sided rigidity, and tenderness, especially if there is vomiting and distension. The constitutional signs are less important than the local, for in some infections, even if they are general, the pulse and temperature may be but slightly affected. Indeed, constitutional symptoms greatly outweighing the local should excite the most careful consideration when appendicitis is suspected, for the former may be merely the expression of an acute absorption from the gastro-intestinal tract, the local signs being perhaps only a painful colic, affecting for the time the right rather than the left side of the abdomen. On the other hand, pain that has made its way to the region of the appendix, that remains there, that is accompanied by extreme muscular rigidity and tenderness, even without fever, should excite apprehension and raise the question of intervention. With tumor and with fever these symptoms require operation, unless there is rapid and unmistakable amelioration; they demand it if there is constant vomiting and beginning distention, even if some of the symptoms show signs of improvement.

On the whole, one seldom errs by operating in cases of severity at this time. The barriers against spreading infection cannot be relied upon—their existence even cannot be assumed. A serous exudate is at hand, ready to receive, mul-

tiply, and transport micro-organisms to the furthest recesses of the peritoneum.

In doubtful cases an unnecessary operation may be avoided by a blood-count made at this time. A leucocytosis often adds the necessary evidence upon which to decide in favor of operation.

The symptoms in a severe and fully developed case of appendicitis may include pain, tenderness, rigidity, tumor, distention, constitutional disturbances, vomiting, and constipation. The time at which these symptoms appear may vary considerably. Some occur at the very earliest manifestation of the lesion, and persist; others appear early and subside early. Some are never observed. The symptoms seen at that critical period in which so many perish—the third, fourth, and fifth days—require careful consideration. What are they, and what weight shall we give them? No one symptom establishes the diagnosis, though several alone may suggest it. They need not all be severe to demand operation, and some may even be wanting. As I have observed them, all are important; but some have more significance than others.

The significance may vary, too, with the stage at which the symptom appears. Considered in detail from their inception to the full severity of the attack—from the beginning up to and through the third, fourth, and fifth days—the prominent symptoms of appendicitis are as follows:

Pain is the earliest, most urgent, most important, most easily misinterpreted sign. Sharp and intermittent, it suggests and is probably caused by the passage of gas or feces by the inflamed areas about the ileo-cæcal valve; dull and continuous, it indicates the presence of a localized peritonitis. Pain is to a certain extent the measure in breadth and depth of the infection. When pain is localized, after the initial stage, it means a local infection; when general, a general one. General pain at the onset of appendicitis becomes local as the infection becomes restrained, though the infection may be general while the pain is yet local. As the infection spreads, so does the pain. Sudden, sharp pain after temporary subsidence means a sudden increase in the affected area,

and at times is ominous of general peritonitis. If pain is severe and increasing in severity, operation is demanded by this symptom alone.

Rigidity becomes right-sided soon after the localization of the infection. Though it may be difficult to estimate a general rigidity, bearing in mind the great tension of abdominal muscles sometimes seen in health, a one-sided rigidity can hardly be mistaken. It is often enough to mask a tumor that under the relaxation of anæsthesia is conspicuous. Rigidity is a symptom of great value in appendicitis. It means but one thing—involuntary protection of underlying structures. It does not follow, however, that the underlying peritoneum has been invaded by micro-organisms, for simple intestinal colics may cause rigidity. Combined with other symptoms, this one possesses a significance of great value. Rigidity with distinctly localized pain in the right lower quadrant strongly suggests appendicitis; with fever, it almost proves it; with tumor, it fully establishes the diagnosis. Rigidity is a symptom rather of onset than of fully established appendicitis, for, as the disease becomes firmly shut off, the tension diminishes. In a few days the right abdomen, in localized abscesses, for example, becomes soft and the outlines of the tumor become easily perceptible.

Rigidity is important in helping to prove an underlying infection. Its prominence and early recognition make variations in its extent easily perceptible. It is therefore a conspicuous sign in estimating the rapidity and extent of spreading infections.

The value of tenderness, too, is great, though this symptom may be the expression of caprice or of imagination. Tenderness that is elicited only by deep pressure should be given little weight. Few cases of appendicitis demand immediate operation when tenderness requires careful examination for its detection. Tenderness in severe cases is usually exquisite; its manifestations almost ocular. Yet even when unmistakably great, I have seen this symptom disappear so rapidly that I have almost suspected its previous existence. In many chronic abdominal cases, and especially in neurasthenics, I have found no peritonitis whatever to account for

this tenderness. In the neurotic, the imaginative, the pathophobic, the symptom should be carefully scanned, especially if unassociated with rigidity, tumor or fever. In connection with these signs, it is, however, insignificant.

On the other hand, the absence of tenderness may be misleading. I have seen serious lesions of the appendix in which neither rigidity, tumor, nor tenderness was prominent, the diagnosis chiefly on localized pain, fever, and leucocytosis. It may be asserted, however, that, as a rule, when there is no tenderness there is no rigidity. A tumor without rigidity or tenderness suggests rather a chronic process than an acute one—a lesion that may and should be studied and watched—one that too often proves to be tubercular or malignant.

As an indication of spreading infection, tenderness ranks with pain and rigidity. If these symptoms are increasing in extent the infection is spreading, when, it is needless to say, immediate intervention is required.

The tumor of appendicitis is perhaps a better guide to treatment than any other one sign, for upon its situation and extent more than upon any one thing depends the probable efficacy of intervention. Localized infection situated in one place will have a small mortality after operation; situated in another, a large. The mortality under operation will depend upon the feasibility of performing that operation without causing a general infection. A tumor to the right or behind the cæcum will permit easy isolation of the operative field; to the left or below, will not. Pelvic and central tumors, especially of large extent, cannot be securely isolated during the manipulations of operation. In separating the adhesions about such tumors it is practically impossible to prevent the spreading of infected fluid over the entire peritoneum, and general infection cannot but occur. Success after such operation is rather a matter of chance than of expectation—a question rather of the nature of the micro-organism present than of the manipulative dexterity of the surgeon. In one case the contents of a large abscess may be freed among the small intestines—stirred in among them as it were—and the peritoneum will take care of the micro-organisms and their products; in another, a single spot of exudate will infect the

whole peritoneum. In the one case a mild and perhaps attenuated bacterium will be rapidly overcome, and in the other an active and virulent one will implant and reproduce itself throughout the abdominal cavity.

The size and consistency of the tumor vary greatly. In the early days the actual tumor is masked by what has been called the cake, which is a combination of tumor, rigidity, and tenderness—the tenderness masking the rigidity, and the rigidity the tumor. Under ether the hard cake may dwindle into an insignificant tumor. For this reason it is difficult to estimate in the first few days the extent of a limited peritonitis. I have often been surprised by the rapid disappearance of a large tumor after subsidence of tenderness and rigidity.

The significance of tumor is great, even if its exact extent is masked. It adds a sign to a suspected appendicitis that is unmistakable. Barring such lesions as intussusception or tuberculosis with tumor at the ileo-cæcal valve, acute abdominal symptoms attended by tumor in the ordinary situations of the appendix are practically sure to be appendicular in their origin.

Too much significance should not be given to the absence of tumor when other symptoms are severe, for it may be so deeply placed as to escape detection.

Vomiting, distention, constipation, though symptoms possessing, as a rule, grave significance, should not be regarded as necessarily the result of a general infection, for occasionally it will be found that their cause is functional rather than organic; reflex rather than mechanical. Associated with general pain and tenderness, even with no other sign, these symptoms mean a general infection. They may by themselves mean nothing but a transitory gastro-intestinal disturbance, and operation undertaken with no confirming signs may lead to disaster.

If, however, after the early hours of a suspected appendicitis there are vomiting, distention, and constipation, no combination of symptoms is more urgent. Intervention must be the rule, even if everything seems unfavorable, for signs that in the progress of a local infection point even with uncertainty toward a general one have a significance that must not be disregarded.

The kind of vomitus and the way in which it is vomited are of importance. Easy and constant regurgitation, for example, is more serious than occasional violent retching; dark-colored vomitus more serious than biliary. The value of the single symptom vomiting depends somewhat upon idiosyncrasy, as some patients vomit persistently after simple anæsthesia, and others do not vomit even with a fulminating peritonitis.

The importance of constipation depends upon its cause. This symptom, if caused by mechanical obstruction, is attended by loud gurgling. If no intestinal sounds can be heard, general peritonitis with intestinal stasis is to be feared. In simple inaction there are occasional intestinal sounds. It must be borne in mind that diarrhœa sometimes is present even in general peritonitis.

The temperature varies extremely in intensity. It may be normal, it may go to 105° . In a general way low temperature indicates the presence of the colon bacillus; high, that of the streptococcus. I have seen a normal temperature when there was a hopeless general infection; a high one when only the denuded inner layer of the appendix was absorbing. Very high temperatures often subside as quickly as they appear; they are rarely persistent. A continued temperature of 101° to 103° , or a temperature rising by degrees from 100° to 103° , with other signs of infection, local or general, demands intervention, or at least strong reasons for non-intervention.

Taken by itself, the temperature does not justify laparotomy unless the diagnosis is positive, though it may add the necessary evidence in cases otherwise doubtful.

Temperature without local physical sign; temperature with pain alone, if used as a guide, will often prove a false one, and may lead the surgeon into error.

The pulse is of value in connection with the temperature as an index of operative necessity. When high and of poor quality the pulse shows perhaps more than any one sign the depth of the constitutional depression. Such a pulse may be the result of a constitutional absorption from a relatively small area—in which case the signs will be those of a local

rather than of a general peritoneal infection. It will, therefore, indicate operation when perhaps the other signs may seem favorable for delay. I have observed time and again the pulse of grave toxæmia attending an absurdly inadequate local lesion—a pulse which, it seemed, would hardly persist through a brief operation, and one which would quickly succumb to the increased absorption of fresh areas unavoidably opened to fresh infections.

On the other hand, the most alarming forms of appendicitis may exist without sensible deterioration of pulse. I have, for example, based a diagnosis of mechanical intestinal obstruction upon a normal pulse and temperature, and found on exploration a hopeless general peritonitis. As a rule, however, the pulse and temperature have their usual significance, that of indicating, on the whole, in conjunction with the history and local signs, the extent of the infection.

The temperature-curve of three or four days is of value in determining our course when from other aspects of the case there is reason to dread the results of operation. A fall in pulse and temperature, with subsidence, or even without subsidence, of local signs indicates the possibility of awaiting a more favorable time for intervention; with signs of existing or threatening general infection, a favorable pulse and temperature make less gloomy the prognosis of intervention.

Certain other symptoms of appendicitis might be considered, but as they are symptoms rather of general peritonitis they need no special mention here.

When seen for the first time on the third, fourth or fifth days the general trend of the case may be more or less accurately determined. There is either general infection or there is not; there is either impending disaster or there is not; there is either marked improvement or there is not. Is it not fair to question at this time those rules of procedure which require in every case exactly the same line of treatment? May we not at least assume that some of these cases will recover without operation, and that some will die with it, and, admitting human fallibility, may we not by applying a universal rule turn the scale against the very patient who would have escaped by other methods of treatment? I am firmly

convinced that by operating we at times do turn the scale against the patient; and, I admit, that by not operating we may at times withhold his only chance. It is at this critical period, therefore, that intelligent discrimination should be encouraged, that each case should be considered as a case by itself; that no sweeping rule of procedure should be advocated.

After the first forty eight hours the conditions found at operation differ materially from those of the earlier hours. Necrosis has been fully established, localization has become successful, or infection has become general. The appendix will be found imbedded in recent adhesions; contiguous to it, surrounding it, or in some way connected with it, will be found a foul-smelling liquid exudate teeming with bacteria. This exudate will vary in its localization between wide limits of peritoneum. It may be far to the right, behind the cæcum; it may be high up, involving liver and kidney; it may fill the pelvis or cover the bladder; it may be buried among small intestines; it may be directly under the skin; it may appear even in the left lower quadrant of the abdomen.

The peritoneal cavity will often be found filled with sterile serum, firmly separated from the infection focus. Too often it will be found already extensively infected. The appendix itself will present all varieties of necrosis, from small gray areas to total gangrene. Even at this stage there may be no definite perforation, though generally one will be found. The meso-appendix will itself often show a total necrosis, and the contiguous viscera will be covered with a gray exudate—pseudo-necrosis. The probable situation at this time can be determined by the experienced operator, and, I may add, the probable outcome of operation, as well as the probable result of delay.

Unfortunately, in the fatal days of appendicitis—the third, fourth and fifth day, or even later—the results of operative treatment are still deplorable. Can we not often tide a patient over those critical days to a time when intervention is almost surely successful—when the danger will be that of simple abscess drainage or of an intermediate operation? Is it not wise conservatism, when the case is severe and of a type that is usually fatal after operation, and when there are signs of im-

provement, to await (always excepting cases of general peritonitis) a more favorable time for intervention? It seems to me that the answer must be affirmative.

Although central localizations of septic fluid about a presumably gangrenous appendix cannot be interfered with in these early days of appendicitis without grave danger of causing general peritonitis, this danger, grave though it may be, must be deliberately encountered:

1. If the symptoms are becoming more severe, and especially if there is any evidence that a sudden extension has taken place.
2. If the patient is dangerously septic, as shown by pulse, temperature and circulation.
3. If, though there is no increase in the symptoms, they are still severe.

Surgical intervention in this particularly dangerous class should be postponed, however, if the symptoms show signs of improvement.

This opinion is based upon the large mortality following operation—a mortality due to the unavoidable spreading of infectious material among intestines that cannot be guarded. As I have already said in connection with special symptoms, intestines cannot be guarded from infection, because the limiting adhesions are so fragile that they give way, if not immediately on opening the abdomen, the moment attempts at walling are made. At the very beginning, therefore, of operation the abdominal cavity cannot escape immediate flooding in spite of all efforts to prevent this accident. Even later, when it is generally possible to arrange gauze barriers and to separate deliberately the adhesions about the appendix, an inopportune rupture will hazard the success of the operation. Not that such accidents are invariably fatal—they are often harmless; still, they cannot but be regarded as the most serious of complications. If it is said that the peritoneum can be relied upon to take care of large quantities of fluid saturated with living and virulent micro-organisms, my reply is that such an expectation is contrary to common sense and to general experience. Were such powers possessed by the peritoneum, well might we question the necessity for the elaborate details of

aseptic surgery. Indeed, if the peritoneum can absorb without damage to itself or to the system, not drops or particles of poison, but pints, or even quarts, it may again be a question how it happens that peritonitis can occur at all.

I cannot but repeat, therefore, what I have said many times before—that the argument against separation of adhesions and the resulting unavoidable contamination, carries the greatest weight, and that, dangerous though it may be, delay in cases that are improving is fully justifiable.

The chief argument in favor of operating upon cases of the class that are improving lies in the possibility of sudden rupture. But in carefully watched cases this rare accident can be immediately recognized, and, after all, it is but the spontaneous occurrence of what the operation deliberately causes. The chief advantage is that the extravasation has a short time in which to spread before cleansing can be attempted. A sure contamination must be balanced against a possible one. The chances favor the policy of non-intervention. Furthermore, if symptoms increase in severity, without rupture, the chances from operation grow better instead of worse, because the prevention of infection becomes the easiest the more practicable the isolation of the operative field. Moreover, is it not possible that the fluids lose their potency as time goes by? The fluids of the early hours seem to have an activity and virulence which those of the later stages lack. Indeed, fluids long confined are often sterile.

From the above considerations it seems not unreasonable to conclude that in severe attacks of appendicitis attended by large collections of fluids, successfully localized operation should be postponed for a time if there are signs of improvement, and more especially if the fluids are localized centrally or in the pelvis.

Another class, by no means small, comprises those cases in which the chances are in the balance, the slightest aggressive treatment being sufficient to turn unfavorably the scale. The usual termination of such cases is death, but occasionally recovery takes place—sometimes with operation, sometimes without. The proper treatment in this formidable class is perhaps more a matter of theory than of fact—of speculation

than of demonstration. The fatalities in such cases always raise the query whether the other line of treatment would not have been better. Indeed, it is but natural, after failure, to wish that some other course had been pursued.

On the whole, however, it seems reasonably clear that patients are usually better treated medically when it is reasonably evident that the slightest shock may turn the scale. The principle is the same as that in shock after extreme violence. He would be a rash surgeon who would amputate a limb during profound shock. The better course would be to wait for its subsidence—for a pulse that could at least be felt. So in the profound shock of peritoneal absorption, except that in the latter reaction is less likely to take place. There is, perhaps, a difference in the significance of shock, according to the period at which it occurs. The initial manifestations of peritoneal contamination are quite another thing from those of fully developed toxæmia, though these two may seem very much alike. The shock, for instance, of invasion is sudden and severe; it affects chiefly the pulse. The temperature may be depressed. In fully developed toxæmia the signs are rather those of approaching death, of cold extremities, lividity, high pulse and high temperature. In one there is the expectation of reaction; in the other of certain death.

The difficulties in the way of settling the question of intervention in cases of great severity seem to me extreme, and I offer my opinion with much diffidence. It would be so much easier to apply a hard-and-fast rule. I, for one, however, cannot subscribe to an invariable rule of procedure at any stage of appendicitis, and especially at that stage when, from the above considerations, there is reason to believe that surgical intervention increases the hazard, already great.

II. Should the appendix be removed in every case?

Many of the reasons for not operating in a case of acute appendicitis apply in considering the advisability of removing the appendix in every case that is treated surgically.

It is assumed that at some time or other, in the absence of distinct contraindications, such as unsuitable conditions of age, temperament, general or local disease, and the like, a diseased appendix should be removed. The question is as to the most advantageous time, all things considered.

The best time for the removal of the appendix is in the period of perfect health, or as near that period as possible. When attacks follow each other frequently, at intervals of a few weeks, we must take the chances of slight local sepsis, for fear of another attack and possibly a more severe infection. When the abdominal cavity is opened in the course of an acute appendicitis the appendix should be removed almost invariably, because the manipulations for drainage are little, if any, less dangerous than those for complete appendectomy. Yet the patient's bad condition and failing pulse occasionally forbid the removal of the appendix, even when the field is fully exposed.

Removal of the appendix is, in my judgment, contraindicated when there exists an abscess that can be drained through a small incision in the abdominal wall.

There are exceptions to this rule. When the abscess is one-sided, when the strength is good, and when the general peritoneal cavity can be well isolated, the appendix may be sought for and removed. In all such cases Harrington's method of gauze-walling between abscess and abdomen affords abundant protection, even in prolonged manipulations. This method I have found so good that in the last eighty-seven operations simple drainage has been used but five times. True, many of these were not right-sided collections, and the appendix, for other reasons, was removed in spite of the danger; but the general trend of my work is toward the removal of the appendix, and cases of simple drainage are becoming more and more infrequent.

Another reason for not searching for the appendix in abscesses of long standing—*i.e.*, with firm walls—is that the appendix is sometimes totally exfoliated. In early cases I have often found a total gangrene, sometimes involving meso-appendix as well as appendix. Such appendices retain their shape, and are often firm, though necrotic. In late abscesses the pus evacuated will sometimes float out a slough, with or without concretions. This slough should be carefully examined, for it may be shown to be the appendix.

If it were necessary to break up adhesions for the sake of thorough drainage, removal of the appendix should then, of

course, be the rule; but this procedure seems to me totally unjustifiable in the vast majority of cases, for as an almost invariable rule there is but one abscess cavity. Should and other develop—a thing which I have seldom seen—that may be drained through the wound of the first, or wherever it may present itself. Some abscesses work through the abdominal wall and point under the skin. Drainage under cocaine is enough to cure such cases. Searching for the appendix at such a time seems absurd. When pus points in the posterior cul-de-sac or in the rectum, it should be evacuated there, unless it can be drained through the abdominal wall without risk of general infection; the appendix should be removed after convalescence. In fact, these deeply-seated pelvic collections are almost precisely like pelvic abscesses from salpingitis, and the reasons for intervention are similar. No form of surgical disease of the abdomen may be more formidable than are the large collections of pus filling the pelvis and overlaid by free coils of intestine. Operation through the abdomen in the acute stage of these large tubal abscesses has an excessive mortality. Delay, with or without vaginal drainage, offers two advantages—one that of decreasing virulence in the micro-organisms, the other that of decrease in the size of the tube. Occasionally, it is true, intervention cannot be postponed, and, risk or no risk, the abdomen must be opened and drained up among and by the intestinal coils. I cannot but feel oppressed, however, by the gravity of such a condition in salpingitis, and whenever I have been able to drain through the vagina or await a time more favorable for intervention, I have been rewarded by recovery. So in pelvic abscesses of appendicular origin, separation of adhesions and drainage upward for the sake of removing the appendix have an excessive mortality; on the other hand, by drainage through the vagina or rectum a patient almost moribund may be tided along to a time when the appendix may be safely removed.

That the appendix should not be sought for when the patient's condition is ominous of speedy death is, of course, obvious. If the appendix can be removed in a few seconds, or even in a few minutes, it may be done, even when the

patient's general condition forbids prolonged search. When, however, the appendix cannot be immediately seen or felt—when, for example, broad areas of omentum must be detached, the wound enlarged, the intestines overhauled—when, in a word, search to be successful must be prolonged and extensive—it seems clear that to remove the appendix is bad judgment, a loss of the sense of proportion of things—a choice of the greater, not the lesser, evil.

If in certain acute cases we decide that operation is not best—that in operations upon certain other acute cases, removal of the appendix is unwise—it remains to consider what remedy, if any, we shall apply to prevent that dreaded recurrence which in so large a proportion of cases must be predicted. Leaving out of the present consideration those mild cases which justify operation perhaps more from disability than from danger of life—although it is impossible, of course, to say that after repeated attacks of a trivial nature a severe one may not ensue—and confining the discussion to those cases in which, after postponing operation, the patient has made a good recovery, it seems clear to me that in all cases, in the absence of contraindications, a deliberate operation should be undertaken in the period of health.

This opinion is based upon the frequency of recurrence after attacks attended by localized peritonitis and after the drainage of abscesses.

In a large proportion of cases of acute appendicitis a second attack must be expected, even if there has been a localized peritonitis of considerable extent. If the original disease started as a perforation near the cæcum, recurrence is more likely than if the perforation were elsewhere.

Though many operations after recovery from even the severest attacks of appendicitis fail to show material lesions in the appendix, most explorations demonstrate unmistakably the septic nature of the previous process. In many instances cheesy masses will be found about a thickened appendix, the whole buried in firm adhesions. Such evidences of previous inflammation, the impossibility of knowing how persistent the previous sepsis in a given case may be, and consequently whether or not temporary drainage may be

necessary—these considerations lead to a postponement of operation for some weeks after subsidence of all signs of the acute attack. Neglect of such a course—a too-early operation after recovery, with closure of the wound without drainage—has led, I believe, to the few disasters that have followed operation in the interval. Such cases really are not operated on in the interval, for they are rather to be classed as sub-acute. In 238 operations performed in supposed perfect health, I have drained for twenty-four to forty-eight hours in a large number, and have lost none. I feel confident, therefore, that closure of the wound adds great risk in conditions of doubtful asepsis. A persistent sinus is very suggestive of an opening directly into the appendix. I have removed several appendices that showed this condition. In one case a sinus in the right lumbar region communicated with the tip of an appendix in the iliac fossa, the tip being the only part shut off from the peritoneal cavity. In another instance the sinus opened into the central part of the appendix. Removal of the appendix, sinus and scar in one piece permitted immediate closure of the wound.

The results of secondary operations after the recovery from simple drainage have been among the most brilliant and satisfactory of our interval operations. Every case has recovered, not only from the operation, but from the hernia, if one existed, and from all pains and discomforts. I believe that after drainage, unless there is good reason to believe that the appendix has entirely sloughed away, and even then if there is a hernia the operation of appendectomy should be completed. Like certain other operations—intercranial neurotomy, for instance, and the removal of brain tumors—at times the safety of the patient demands that the danger be divided between two operations. In such cases the second makes the completed operations. This course, eminently wise under certain conditions, and made imperative by the great risks that at least some of us see attending the so-called completed operation for appendicitis, renders the treatment of large appendicular abscesses particularly gratifying. Such advantages as attend the incomplete operation are fully remedied by the completed, and, what is most to be desired, there

is little danger in either. The combined dangers of the operation completed at one sitting vastly outweigh the dangers when performed in two. Finally, by the two-stage operation, hernia and other weaknesses of the abdominal wall are remedied as effectually as is possible.

THE PREVENTION OF SHOCK IN SURGICAL OPERATIONS.

Moynihan (*British Medical Journal*, November 5, 1899, p. 1471) describes briefly as follows the measures that he would recommend for the prevention of shock: The operating theatre, if in a hospital, should have a temperature of from 70° to 75° F., and the patient should be placed on a table warmed by a current of sterile hot water. As an additional, though not an invariable adjunct to these means for retaining heat, the upper and lower limbs of the patient may be bound in hot cotton-wool and flannel bandages. Strychnine is administered hypodermically before the anesthetic or the operation commences, the dose being modified according to circumstances. A dose of x m. of the solution of strychnine (gr. $\frac{1}{12}$) is usually given at first, and during the operation v m. may be given when required; as much as xxx m. (gr. $\frac{1}{4}$) may be given without harm. Ten, fifteen or twenty ounces of hot saline solution are introduced into the rectum, with or without a small quantity of brandy. As soon as the patient is under the influence of the anesthetic the infusion of saline solution, to the extent of from one to four pints, may be begun. If, after the operation, the patient is at all collapsed, it is important to postpone removal to the wards.—*Medical Record*.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION OF ORTHOPÆDIC SURGERY—MEETING OF NOVEMBER 17, 1899.

FRACTURE ADDING TO THE DEFORMITY OF POTT'S DISEASE.

Dr. W. R. Townsend presented a boy, 15 years of age, who developed Pott's disease in the lower dorsal and upper lumbar region six years ago. Two years ago, having recovered with considerable posterior curvature, after treatment by the plaster-of Paris jacket, he fell from an ice wagon, striking on his head. Plaster of Paris was re-applied. He presented a projection on each side at about the level of the twelfth dorsal vertebra. The spinous processes could be felt between the elevations, which were very marked, and might have been supposed to be callouses following fracture of ribs near vertebral column.

Dr. R. H. Sayre said that in addition to the antero-posterior curve there was lateral displacement which might well have been the result of vertebral fracture.

Dr. S. Ketch* said that the bony projections were secondary formations, the result of traumatism, and distinct from the spinal disease.

* Dr. Samuel Ketch died suddenly of cardiac disease on December 14, 1890, at the age of 44. His untimely decease was sincerely mourned by his bereaved colleagues. The meeting of Dec. 15, 1899, was adjourned out of respect to his memory.

RICKETS IN A DWARF.

Dr. Townsend presented a girl, 6 years of age, 35 inches in height—the average height at that age being between 40 inches and 42 inches. There was enlargement of the epiphyses of the long bones with an enlarged head, prominent chest, and protruding abdomen. She was a mouth-breather, and failure to grow normally might have been due partly to adenoids and insufficient oxygenation. There might have been obstruction in the posterior part of the nose, although the result of inspection anteriorly had been negative. The characteristic skin and facial expression of cretinism were absent.

Dr. Sayre suggested enlargement of the air passage by treating the tonsils and adenoids.

Dr. Ketch said it would be of interest to know whether this relief would promote normal growth.

Dr. H. S. Stokes said that the patient was probably a constitutionally lymphatic child, one of a class of patients in whom the administration of anesthetics was attended with danger. Without hastily making a positive diagnosis of this condition, he suggested that the use of anesthetics be preceded by a thorough physical examination.

POTT'S DISEASE OR FRACTURE OF VERTEBRÆ?

Dr. Townsend presented a girl, 6 years of age, with a very obscure history. Two years ago, when living with her grandmother, after an accident in which she fell down a flight of stairs, striking the back of her neck, a bony prominence had been noticed, with difficult respiration and a habit of supporting her head with the hand placed under the chin. Kyphosis was marked, as shown by the accompanying cut, involving the sixth and seventh cervical and the first and second dorsal, with a depression of the upper cervical vertebræ.

Dr. A. B. Judson thought that the number of the involved vertebræ pointed away from fracture and toward Pott's disease. The elements of diagnosis in orthopædic cases might be arranged in the following order of relative importance: First, signs (objective); second, symptoms (subjective); third, history as given by the mother; and fourth, history as given by the grandmother.

Dr. Sayre said that a forward position of the head in cervical Pott's disease was frequently attended by difficult breathing. He thought, however, that the child had suffered a fracture, and recalled the case of a man who had fallen down stairs, striking the back of his head. Partial paralysis



POTT'S DISEASE, OR VERTEBRAL FRACTURE

of the arms developed from pressure. A diagnosis of Pott's disease had been made, but the signs and history indicated a fracture.

Dr. Townsend said that the treatment at least was not doubtful. The affected vertebræ should have complete rest, either by a plaster jacket and head-spring, or by a posterior spinal support and chin-piece. The latter would be less conspicuous and give better support, with or without the addition of supports going up the back of the head, as might be determined by the progress of treatment, which should be prolonged until the disappearance of all signs of an acute condition. Ultimately the patient would carry the head erect without much deformity, as is the rule in cervical diseases thus treated.

THE DURABILITY OF THE PLASTER OF PARIS JACKET.

Dr. Stokes related the history of a case of Pott's disease

in a girl who was 4 years of age when first seen in September, 1894. Duration of disease two months. The tenth dorsal vertebra was affected. The plaster of Paris jacket had been applied anew seven times at intervals of from eight to fifteen months, the average being eleven months. No pain or discomfort had been traced to the apparatus. At the last application, on October 13, 1899, it was found that a small stone had slipped into the jacket and caused an erosion which had healed in a few days.

Dr. Townsend had seen plaster jackets that had been worn two years.

Dr. L. W. Ely cited a case in which the jacket had been re-applied at intervals of thirteen and eight months without excoriation.

Dr. Sayre referred to the case of a child who had worn a solid jacket for two years.

Dr. H. Gibney cited three cases: 1. A boy seen in 1891. Age 4 years. Location, middle and lower dorsal region. Emaciation. A large psoas abscess. First jacket was worn two months, the second one year, and the third had been applied two months ago. There had been no increase of deformity, the abscess had been to a large extent resolved and the general health had improved. 2. Boy; 1895. Age 6 years. Tenth dorsal. First jacket worn three months, the second eleven months, and the third was applied three months ago. The local condition was favorable and the health had improved. In the third case, that of a woman of 27 years, a firmly-fitting jacket had been worn for a year without inspection, with freedom from pain and discomfort, and with good effect.

Dr. Sayre cited two cases in which patients had not done well with jackets that were removable, but which progressed favorably toward recovery when the immovable dressing had been applied. In both cases the treatment had been modified in its early stages by the overweening kindness of the grandmothers of the children. He had seen cases in which efforts to replace comfortable jackets by new ones had not been brilliantly successful, it having been a long time before the patient was again made comfortable. For obvious reasons a

jacket should not remain in place too long on a child who was growing fast.

Dr. V. P. Gibney said that more important than the question of time was that of applying the jacket so as to give good support and avoid excoriations. A jacket well applied would not disturb the skin and should be durable. In the case reported by Dr. Stokes the trifling excoriation had soon healed and a cure had been effected by the prolonged splinting of the back.

Dr. Sayre said that excoriations could generally be avoided by a careful application of the jacket.

Dr. Stokes said that the percentage of excoriations was small, and in ten cases the trouble had been due to the jacket in four cases; and to foreign bodies, little things such as pennies and button-hooks, in six cases. Excoriations caused by a jacket were evidences of a want of skill and experience on the part of the surgeon.

Dr. Sayre said that the skin could be kept clean and healthy by passing a whale bone inside of the jacket and so pulling up and down a fine handkerchief dampened with alcohol.

Dr. H. Gibney said that a solid jacket should be applied over a long strip of six-inch-wide linen or gauze, which could be daily wet with alcohol and drawn back and forth.

PLASTER OF PARIS COMPARED WITH STEEL APPARATUS.

Dr. Ketch said that the condition of the skin should be made the subject of stated investigation, not to prevent excoriations, but to ascertain whether we were giving the diseased vertebral column all the mechanical support which the toleration of the skin warranted. The use of a steel apparatus facilitated an occasional and desirable estimate of possible decrease or increase of deformity, which was impossible with the immovable dressing. Changes in the shape of the patient, from growth or otherwise, should meet with corresponding changes in the pressure made by the apparatus.

Dr. Townsend said that the frequent removal of the jacket or brace was one of the worst things that could be done. It was not practiced in the treatment of fractures. In Pott's

disease we sought proper ankylosis at the seat of disease. We therefore immobilized the vertebral column. So long as the jacket was clean and the skin healthy we could forego the doubtful advantage to be gained by frequent inspection and rely on the effectiveness of the apparatus.

Dr. Ketch said that the removal of the brace for alterations, when done with ordinary care, could not delay or interfere with consolidation. The more scientific procedure was to use an apparatus which was under intelligent surgical control.

Dr. V. P. Gibney had failed to see that important benefits could be gained by taking off the apparatus from time to time. If sure of the diagnosis and of a well-fitting plaster jacket he was confident of a good result.

Dr. Sayre said that in the cervical region, and anywhere above the tenth dorsal, a jacket should be supplemented by the jury-mast and by a brace to control the shoulders. Traction control of the movements of the head were very important. He often made use of a metal and leather base to make a base for the jury-mast

Dr. H. Gibney commended the method of application in which the patient rested on two untempered steel rods, bent to fit the shape, and elevated from the table, partly lying on them supine, and partly held up by two assistants who made gentle traction, the rods being drawn out while the plaster was setting.

Extracts from Home and Foreign Journals.

SURGICAL.

RELAPSED CLUBFOOT.

Taylor (*Maryland Med. Jour.*, December 2, 1899) says that in all cases of true congenital talipes equino-varus if the foot is not mechanically fixed in an over-corrected position after operation so that it can be walked on, it will relapse into just as bad if not a worse position than before operation. He mentions three such cases. The patients had had tenotomy done in infancy, and wore plaster-of-Paris casts for a month or more, and within six months or a year they were worse than before, so that a simple tenotomy no longer sufficed to correct the deformity. The best surgical relief of talipes equino-varus will be worse than useless if correction is not maintained by a suitable ambulatory brace for months afterward. Such a brace must exercise pressure at three points: (1) at the metatarsal phalangeal articulation of the great toe; (2) at the inner side of the heel; and (3) at the calcaneocuboid articulation on the outer side of the foot. There must be a stop joint at the ankle to prevent recurrence of the equinus. The inner side of the brace and shoe must be lower than the outer side to prevent supination of the foot. The author strongly condemns any mutilating operation to the bony frame of the foot, such as removal of the astragalus, these operations being contrary to the best interests of the patient.—*Medical News.*

GALL STONES.

Dr. Joseph Ransohoff of Cincinnati considers the etiology, diagnosis and operative treatment of gall stones (*Journal of the American Medical Association*, September 16), and feels warranted in submitting the following propositions: (1) the gall stones found in a gall bladder are generally formed together, that is about one and the same time. Their removal will not be followed by recurrence unless a reinfection of the biliary ways occurs; (2) cholecystotomy with drainage should be regarded as the normal operation; (3) save in exceptional cases the operation should be done at one time; (4) ideal cholecystotomy or cholecystendesis is not to be recommended; (5) cholecystectomy is rarely indicated in acute processes. It is more dangerous than cholecystotomy. Since more stones are formed in the gall bladder, cholecystectomy is the more radical operation. It should be reserved for chronic cases in which a restitution of the gall bladder to the normal cannot be expected; (6) Cysticotomy is a safe supplement to incision of the gall bladder for stones of the cystic duct; (7) Cholelithotomy with suture and drainage should be considered the routine procedure in common-duct stones. Incision of the duct through the duodenum or from an incision in the loin (Tuffier) will rarely be needed; (8) cholecystenterostomy has a limited but distinct field of application, *i.e.*, obstruction jaundice from malignant disease or impermeable cicatricial common-duct stenosis.—*Medical Record*.

SURGICAL TREATMENT OF PERFORATION OF THE BOWEL IN
TYPHOID FEVER.

The views of the author (Dr. W. W. Keen in *Phil. Med. Jour.*, IV, No. 19, p. 875) on the operative treatment of typhoid perforation may be summarized as follows:

1. The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed.
2. If it be possible to determine the existence of the preperforative stage, exploratory operation should be done under cocaine anesthesia before perforation, shock and sepsis have occurred.

3. After perforation has occurred, operation should be done at the earliest possible moment, provided,

4. That we wait till the primary shock, if any be present, has subsided.

5. In a case of suspected but doubtful perforation, a small exploratory opening should be made under cocaine to determine the existence of a perforation, and if hospital facilities for a blood-count and for immediate bacteriological observation exist, their aid should be invoked.

6. The operation should be done quickly, but thoroughly, and in accordance with the technic already indicated.

7. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked.—*The Post-Graduate*.

HERNIA FOLLOWING ABDOMINAL OPERATIONS.

Dr. A. Laphorn Smith (*Am. Jour. of Surg. and Gyn.*, October, 1899) considers post-operative ventral hernia as preventable, and suggests leaving the stitches in for one month or by using non-absorbable buried sutures. He prepares silk-worm gut by putting it in sealed glass tubes and boiling. He discards the drainage tube and makes drainage through the vagina. In closing the abdominal wound, he is careful that no peritoneum comes between the fascia and the muscle. He thinks that patients with buried silk-worm gut stitches need not stay in bed over two weeks.—*The Post Graduate*.

THE PLACE OF IODOFORM IN SURGERY.

Dr. Edmund C. Brush (*Journal of the American Medical Association*, December 16), to answer the question, "Would surgery suffer if iodoform was abolished?" addressed a circular letter to one hundred representative surgeons holding recognized positions in medical schools respectively in London, Edinburgh, Quebec, Toronto, Montreal, and in twenty-two schools in the United States. The letter contained four questions: 1. What germicidal powder do you prefer? 2. Your second choice in germicidal powders. 3. Have you seen any bad effects from using iodoform? 4. In your opinion would surgery suffer if iodoform was abolished? The

author received eighty-four replies. The summary showed that twenty-seven surgeons used iodoform, twenty-four no powder of any kind, twelve boric acid, eight aristol, and thirteen various—*e.g.*, acetanilide, nosophene, iodol, etc. As to effects, seventy-three had seen bad effects, eleven had not—but four of the eleven did not use iodoform. The effect of the abolition of iodoform on surgery, according to thirty-seven, would probably be negative, while forty-seven considered that surgery would suffer. Of this latter class, twenty-seven think the detriment would be general, twelve limit it to surgical tuberculosis, and eight to its use in gauze and specific cases.

Dr. Brush considers that for the present the answer to the question proposed seems to be "Yes, to a very limited extent!" but he predicts that in five years the answer will be "No, not in the least!"—*N. Y. Med. Jour.*

COCAINIZATION OF THE SPINAL CORD AS DONE BY BIER.

Seldowitsch (*Centralblatt für Chirurgie*, Oct. 14, 1899) states that clinical experience has borne out our expectations after experimenting on animals in this direction. The reports of four cases are given, and in each the attempt was highly successful. In the first, after an injection of cocaine into the spinal canal, an amputation of the leg was performed, total anesthesia of the extremity persisting for fifty-six minutes. In case No. 2 an amputation lasting thirty minutes was performed, and this with complete absence of pain. For thirty-five minutes complete lack of feeling as high as the navel persisted in a third case. The knee was resected without unusual sensations in No. 4, and this although the operation lasted over an hour. In all these instances a chill and high fever of short duration followed the operation, and in three of them there was headache, vomiting and dizziness—*Medical Review*.

X-RAYS AND INJURIES OF THE HEAD.

J. Rudis-Jicinsky (*N. Y. Med. Jour.*, Dec. 2, 1899) advocates the more extensive use of the X-rays as a means of diagnosis in cases of injury of the head. With its help the

local cranial wound may be much better examined than in the usual way. The shadow of bone and the shadow of hematoma are altogether different, and in cases of fracture the plan of treatment can be much better determined after such an examination. In cases of foreign bodies the results of diagnosis are still better obtained. Radiographs are illustrated which show the marked difference in shadow between the bony parts and four lead shot introduced behind the bone. In cases of hematoma, bony growths within the cranial walls, some tumors of the brain between the cranial wall and the clear water, and cases of hydrocephalus, the X-ray will be a good help in diagnosis. The pictures shown prove that the shadows, which are seen most beautifully, correspond exactly with the radiation from the disk of platinum in the Crookes tube. Careful and accurate work and a knowledge of anatomy and pathology are necessary if a correct diagnosis is to be made and an accurate picture produced.—*Medical Review.*

MEDICAL.

AORTIC VALVE DISEASE.

Theodore Fisher (*Edinburgh Medical Journal*, November, 1899), in a short and practical article on the morbid anatomy of the aortic valves, brings out a few points of general interest. He distinguishes two main forms of chronic disease of this valve in adults. In one the disease is associated with disease of the aorta, and in the other the aorta is almost invariably healthy. In one the aortic segments are thickened and deformed on account of an increase in the fibrous connective tissue, but calcareous changes are absent; in the other there is little or no fibrous tissue, but great deformity due to calcareous deposit. In one, again, the disease seems to be an extension from the aorta; in the other it appears to arise primarily in the segments of the aortic valve. One disease usually produces aortic regurgitation, unassociated with any stenosis, but the other almost invariably produces stenosis,

which is not infrequently uncomplicated by regurgitation. The etiology of these types of disease is obscure. Aortitis is probably the initial disease in the first type. Whether this aortitis is of syphilitic origin or not, there seems to be but one opinion, and that is positive, but syphilis alone is not the only responsible factor.

The etiology of the calcareous form is still undecided. Although text-books ascribe to syphilis, gout, alcoholism and Bright's disease important etiologic relations to the disease, Fisher believes that such conclusions rest on very unsatisfactory data. He attaches considerable importance to mechanical strain.—*Medical News*.

APOMORPHINE IN ACUTE ALCOHOLIC DELIRIUM.

The *Canadian Practitioner* for December, 1899, quoting Merck's *Archives*, says that Tompkins calls attention to a new use to which he has several times successfully put apomorphine hydrochloride. He says that in cases of acute alcoholism with delirium, it "gets in its work in minutes, whereas it takes hours for bromides, chloral and the like to have effect." He considers it far superior to morphine in such cases, as it eliminates the poison while morphine dries up the secretions. Its use is, however, generally contraindicated in genuine cases of delirium tremens, because there is usually weakness of the heart. In one case the author, being called about midnight to see a man in convulsions, from his knowledge of the man's habits and the odor of liquor in his breath, easily made the diagnosis, and he at once injected hypodermically a tenth of a grain of apomorphine hydrochloride. In four minutes free emesis occurred, rigidity changed to relaxation, and excitement to sleep.—*N. Y. Medical Journal*.

OBSTETRICAL.

THE LOCAL TREATMENT OF PUERPERAL INFECTION.

Arnold W.W. Lea (*The Medical Chronicle*, August, 1899) states that the conclusions which a study with analysis of

forty-eight cases seems to justify are as follows: (1) The rise of temperature over 101.4° F. during the puerperium, not obviously accounted for by other causes, should lead to a thorough examination of the genital passages. (2) If no sufficient explanation is found in the condition of the perineum or vagina, a uterine douche should be at once given with due precautions. (3) If within twenty-four hours the temperature has fallen definitely, no further exploration is required, but the douche may be repeated if the temperature again rises. (4) If at the end of twenty four hours the temperature is higher, and the pulse rate is increased, the cavity of the uterus should be explored with the sterilized finger. (5) If the initial rise of temperature is great (103° F. or over), with or without rigor, the uterus should be explored at once, not waiting twenty-four hours to observe the effect of the douche. This is more especially indicated if the uterus is bulky, showing delayed involution, since this points to putrefaction of retained products or to septic endometritis. (6) If clots or placenta are discovered, they should be removed with the finger or the curette, a douche given, and a gauze drain inserted for twenty-four hours. (7) In the great majority of cases it is wiser thoroughly to curette the uterus, with the object of removing the whole of the decidua and retained products. (8) There is no evidence that curettage, if done with every precaution, favors the spread of infection. In a large proportion of cases the infection is rapidly checked. (9) In very virulent infection early curetting with the object of sterilizing the uterine cavity affords the best chances of a successful result. (10) If curettage entirely fails, it must be repeated or not, according to the local conditions present. The prognosis, however, in the absence of a definite localization of the infective process, is bad. (11) In some cases, if curettage fails and there is no evidence of general infection of the blood stream, vaginal hysterectomy, if performed in good time, may be successful. (12) Anti-streptococcic serum should be given early and freely in cases of proved streptococcic infection. It is of little use in advanced stages of the disease.—*Medical Record.*

Editorials, Reviews, Etc.

PUBLISHER'S NOTICE.—The JOURNAL is published in monthly numbers of *Forty-eight pages*, at one dollar a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money-order, draft, or registered letter, should be addressed to the Business Manager, SAMUEL S. BRIGGS, M.D., Corner Summer and Union Streets, Nashville, Tenn.

All communications for the JOURNAL, Books for review, exchanges, etc., should be addressed to the EDITOR.

SMALL-POX.

Our city is supposed to be in the throes of a severe epidemic of small-pox. There have been some two dozen cases in the last three or four months, all mild and scattered.

All of the cases have been promptly isolated and the dwellings quarantined. There was a general vaccination less than fifteen months ago, and vaccinators are busy again in their endeavor to render our citizens immune.

There is very little uneasiness here on account of the disease, but as every case is reported promptly in the daily papers, and ten times magnified by those at a distance, we have been given the credit of harboring a full-grown epidemic, and business is suffering somewhat, for traders shun the place as unclean, merchants preferring to go elsewhere to buy and sell.

The people seem to be more stirred up over being vaccinated than from a fear of small-pox, and the question is being

constantly asked: If vaccination fails is one to be considered immune?

We feel confident that there will be no spread of the disease, which seems to be very mild, no death having occurred from it, and that the authorities will have no difficulty in controlling it.

There has been considerable complaint in regard to the results of vaccination in the past, many having suffered severely, the result, no doubt of a lack of cleanliness, either on the part of the physician or patient, or both. With ordinary care and the use of reliable lymph, these unpleasntnesses should be avoided.

OBITUARY.

WILLIAM A. HAMMOND, M.D.

William A. Hammond, M.D., ex-Surgeon-General of the United States Army, died at his residence in Washington, D. C., at 9 p.m., Friday, Jan. 5, inst., having been stricken with heart failure after the hurried ascent of a flight of stairs; death came almost immediately. Dr. Hammond was born at Annapolis, Md., Aug. 28, 1828. He was graduated at the Medical Department of the University of the City of New York, and entered the United States army in 1849 as an Assistant-Surgeon with the rank of First Lieutenant. In October, 1860, he resigned to accept the Professorship of Anatomy and Physiology in the University of Maryland. At the beginning of the civil war he again entered the army, and was assigned to the organization of general hospitals in Hagerstown, Frederick and Baltimore. Afterwards the Sanitary Commission urged his appointment as Surgeon-General of the Army, and in April, 1862, he received his commission with the rank of Brigadier-General. He instituted radical changes in the or-

ganization of his own department and managed his official business with great ability. With keen appreciation of the wonderful opportunities for instructive and unusual specimens of gun-shot injury, he established the Army Medical Museum at Washington, and suggested the plan of the Medical and Surgical History of the Rebellion. Unfortunately, his career was abruptly closed and his reputation clouded by a charge of irregularity in the award of contracts for medical supplies. He was tried by court-martial and dismissed from the army, August, 1864. He then removed to New York, where he practised his profession, making a specialty of diseases of the nervous system, and promptly established himself as a recognized authority. He was Professor of Diseases of the Mind and Nervous System successively in Bellevue Hospital Medical College and in the Medical Department of the University of the City of New York. Later he joined with other of his colleagues in founding the New York Post-Graduate Medical School.

In accordance with an act of Congress, which was passed in 1878, the President of the United States was authorized to review the proceedings of the court martial. As a result of the President's investigation, Dr. Hammond, in August, 1879, was exonerated and restored to his place on the rolls of the army as Surgeon-General and a Brigadier-General on the retired list.

Dr. Hammond was a voluminous writer on subjects connected with his specialty, and contributed frequently to current medical literature. He founded and edited the *Maryland and Virginia Medical Journal*, and was one of the organizers of the *New York Medical Journal*. He established and edited for a time the *Quarterly Journal of Psychological Medicine and Medical Jurisprudence*. Dr. Hammond was a man of commanding presence, and possessed of extreme self-confidence and remarkable personal magnetism.

Two children survive him—Dr. Græme Monroe Hammond of New York, and the Marchioness of Lanza, formerly Miss Clara Hammond. His remains were interred at Arlington Cemetery with full military honors.—*Medical News*.

SIR JAMES PAGET.

The death of Sir James Paget recalls a period of English surgery when it occupied a position as high, if not higher, than that of surgery in any other country. Sir James' career began early in the century, and he was already in his prime when Virchow was still a young man and enunciating his new ideas of cellular pathology, and Lister was practising surgery in Glasgow and still unknown to fame.

Paget's reputation, both as a surgeon and a scientific man, was based upon his lectures on "Surgical Pathology." This book, the first edition of which appeared in 1853, opened to the Anglo-Saxon student a treasure house of surgical knowledge which gave inspiration to many a young surgeon to look beyond the mere mechanical side of his profession, and not to be satisfied with the crude description of disease which passed current in the text-books of the day. The technique of the microscopy of that time was still very crude and the knowledge which it yielded was known to but few. What Hyrtl afterwards called the kid glove work of the laboratory was then unknown, and to the student of to-day, accustomed as he is to instruments of precision like the modern microtome, to the intricacies of aniline stains and other refinements of the modern laboratory, Paget's workshop would have seemed a poor and humble source to have produced such far-reaching influences. Those, however, whose privilege it has been to know the man would not be surprised at the results he was able to obtain. An acute observer and a painstaking student, he possessed in an unusual degree the ability to express his thoughts in easy and elegant language, and it was at his lec-

ture at St. Bartholomew's Hospital that the results of his investigations in pathology first took shape. He was as ready with his pen as with his tongue, and his colleagues to this day bear testimony to the facility with which, while surrounded by his family, he could quietly write out chapters which have since given him fame.

Those who have been brought up under the influence of the modern German school should not forget the scientific work of the English-speaking teachers of that time. They should realize that some of the impetus which is now being felt on the scientific side of medicine came from England, and that the work of Paget was promptly followed by that of Lister.

Paget has also left his mark as clinician in his clinical lectures and essays. Although they were written before the antiseptic era had been firmly established they are replete with valuable information. Many of his expressions, such as the "nervous mimicry of disease," the "stammering of the bladder," "quiet necrosis," and other well-known phrases, are destined to hold their place in literature. His lecture on the "Calamities of Surgery" is one which every beginner should not fail to read. The name of Paget has not been as familiar to the student of the last decade of the century as it was before. The distinguished author had outlived most of his generation, and of late years had so far yielded to the pressure of the hand of time as to be unable to contribute to current literature or to continue to occupy a conspicuous position among his professional brethren. The International Medical Congress in London held in 1881 was probably one of his last public appearances before the medical world. For many years he had lived in the retirement which his brilliant work as a surgeon and a teacher had entitled him to enjoy.—*Boston Medical and Surgical Journal*.

THE following officers have been elected by the Memphis Medical Society for 1900: President, Dr. E. C. Ellett; Vice-President, Dr. E. A. Neely; Secretary and Treasurer, Dr. Edwin Williams; Reporter, Dr. R. B. McKinney.

OSTEOPATHS IN GEORGIA—Gov. Candler of Georgia has vetoed a bill passed recently by both houses of the General Assembly, providing for the practice in that State of osteopathy. At the public hearing given by the Governor before taking action on the bill, it was contended that osteopaths knew nothing of *materia medica*, while they would be given the right to prescribe medicine the same as any regular licensed physician should the bill become operative.—*Medical Record*.

THE well-known aversion of the profession to all forms of secret mediums is not fully appreciated by the laity, who seem to think that the physician writes his prescription in Latin (dog Latin, usually) in order to prevent the patient from understanding or learning what the remedy is. It is generally best that the patient should not know what he is taking, and he would know very little more if the prescription were translated for him.

Everyone will acknowledge that it would be unwise for the physician to prescribe a remedy he did not know the ingredients of. There are many valuable prescriptions masquerading under trade names and used by many members of the profession. Among these formulæ we find one—*Satyrion*—a very suggestive name. Its constituent parts are saw palmetto, false bitter-sweet, couch grass, *moyra pua-ma*, and phosphorus, all of which promise to produce a valuable combination for the treatment of impotent cases. The proportion of the different ingredients we are unable to give at present, but hope to do so at an early date for the benefit of our readers.

BOOK NOTICES.

A TEXT-BOOK OF DISEASES OF WOMEN. By CHARLES B. PENROSE, M. D., PH.D.; Professor of Gynecology in the University of Pennsylvania; Surgeon to the Gyneccean Hospital, Philadelphia. Illustrated. Third Edition, revised. Price \$3.75 net. Philadelphia: W. B. SAUNDERS, 925 Walnut street, 1900.

This handsome book has in its previous editions acquired an enviable reputation for itself, and is very popular with the profession. This, its third, edition has undergone a thorough revisal, and has had all the additions necessary by the increase of knowledge of gynecology. We quote from the author's preface to the first edition in order to show our readers the scope and objects of the volume:

"I have written this book for the medical student. I have attempted to present the best teaching of modern gynecology, untrammelled by antiquated theories or methods of treatment. I have, in most instances, recommended but one plan of treatment for each disease, hoping in this way to avoid confusing the student or the physician who consults the book for practical guidance. I have, as a rule, omitted all facts of anatomy, physiology and pathology which may be found in the general text-books upon these subjects. Such facts have been mentioned in detail only when it seemed important for the elucidation of the subject, or when there were certain points in the pathology that were peculiar to the diseases under consideration."

TWENTIETH CENTURY PRACTICE: An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes. Volume XVIII—Syphilis and Leprosy. New York: WM. WOOD & Co., 1899.

This volume is made up of the contributions of three very well known authorities, Jonathan Hutchinson, London; Eduard Lang, Vienna; and Prince A. Morrow, New York—three names that furnish ample guarantee of the high character of the work. Of all modern composite works, the publishers have certainly succeeded in presenting in this the very best. The physician who possesses this will have in it a complete medical library in twenty volumes. The thanks of the entire profession are due to the enterprising publishers for their excellent encyclopedia.

THE SURGICAL DISEASES OF THE GENITO-URINARY TRACT, VENEREAL AND SEXUAL DISEASES. A Text-Book for Students and Practitioners. By G. FRANK HYDSTON, M.D., Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Medical Department of the State University of Illinois; Professor of Criminal Anthropology in the Kent College of Law; Surgeon-in-Chief of the Genito-Urinary Department of the West Side Dispensary; Fellow of the Chicago Academy of Medicine; Fellow of the American Academy of Political and Social Science; Delegate from the United States to the International Congress for the Prevention of Syphilis and the Venereal Diseases, held at Brussels, Belgium, Sept. 5, 1899, etc. Illustrated with 233 Engravings. 6½x9¼ inches. Pages xvi-1024. Extra Cloth, \$5 net; Sheep or Half-Russia, \$5.75 net. THE F. A. DAVIS CO., Publishers, 1914-16 Cherry street, Philadelphia.

There is no one in the profession who has worked harder or more conscientiously in his chosen field than the well known author of this book. We are greatly pleased to see that his labors have been rewarded in the appearance of one of the best text-books on the subject recently issued from the medical press. It is just such a book as we would expect such an author to produce. It is admirable in all its essentials. We are greatly pleased with the work, and congratulate the author upon his success.

OPERATIVE SURGERY. By JOSEPH D. BRYANT, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for the Insane; Fellow of the American Surgical Association; former President of the New York Acad-

emdy of Medicine; President of the New York State Medical Association, etc. Vol. I—General Principles, Anæsthetics, Antiseptics, Control of Hemorrhage; Treatment of Operation-Wounds, Ligature of Arteries; Operations on Veins, Capillaries, Nervous System, Tendons, Ligaments, Fasciæ, Muscles, Bursæ, and Bones, Amputations, Deformities; Plastic Surgery. This volume contains 749 illustrations, fifty of which are colored. New York: D. APPLETON & Co., 1899.

This is one of the classic text-books now appearing in its third edition. Former editions of the work gave general satisfaction to the profession, and it rapidly became popular as a text-book and work of reference. It has a great deal to recommend, not the least of which is its excellent arrangement and admirable illustrations. To the surgeon it is a useful work for reference, to the occasional operator a splendid guide, and to the student a good text-book. We take great pleasure in recommending it to our readers as an advanced text-book, bringing the subject fully abreast with the developments of modern surgery.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc.; and F. F. BURGHARD, M.D. and M.S. (Lond.), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc. In Six Volumes. Volume II—The Treatment of the Surgical Affections of the Tissues, including the Skin and Subcutaneous Tissues, the Nails, the Lymphatic Vessels and Glands, the Fasciæ, Bursæ, Muscles, Tendons and Tendon Sheaths, Nerves, Veins and Arteries—Deformities. LEEA BROTHERS & Co., Philadelphia and New York, 1900.

This work is to be finished in six volumes. We were greatly pleased with the first volume, and are equally so with this. The authors are making a very useful series, and we are sure it will rapidly become a favorite. It is profusely illustrated and its text is exceptionally clear and distinct. The authors are well known all over the world as able practical surgeons whose wide experience enables them to realize the wants of the practitioner and to fill out the want accordingly. We have no hesitation in recommending the work to our readers.

REFRACTION AND HOW TO REFRACT: Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By JAMES THORINGTON, A.M., M.D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Surgeon at Wills' Eye Hospital; Associate Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia; Member of the American Medical Association; Ophthalmologist to the Elwyn and the Vineland Training Schools for Feeble-Minded Children; Resident Physician and Surgeon Panama Railroad Co. at Colon (Aspinwall), Isthmus of Panama, 1882-89, etc. Philadelphia: P. BLAKISTON'S SON & Co., 1012 Walnut street, 1900.

A very useful guide for those interested in the rather difficult subject of which it treats. It is intended for beginners in the study of ophthalmology, but will be of value to those whose mathematical acquirements are limited. The work is practical and systematic, and makes an understanding of optics easily possible. It is plentifully illustrated, nearly all of which are new. We take pleasure in commending the work as a highly valuable guide upon the subject.

A MANUAL OF THE PRACTICE OF MEDICINE: Prepared Especially for Students By A. A. STEVENS, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania; Physician to St. Agnes' Hospital and to the Out-Patient Department of the Episcopal Hospital, etc. Fifth Edition, revised and enlarged. Illustrated. Price, \$2 net. Philadelphia: W. B. SAUNDERS, 925 Walnut street, 1898.

We are greatly pleased with this attractive volume. It is a *multum in parvo*, and should prove of exceptional value to the busy practitioner and the busy student, who is sometimes appalled by the sight of modern voluminous text-books upon the practice of medicine, so that it is a relief for him to have a compact, systematic and well-written book like this to help him in his labors. That it is already a popular work is evinced by its appearance in its fifth edition. An especially attractive feature of this publication is its morocco binding, which is flexible and durable.

Publishers' Department.

GYNECOLOGICAL HINTS.—Erosions of the os uteri or granular os are quite common conditions and usually yield rapidly to appropriate treatment. After cleansing the vagina and cervix a strong solution of sulphate of copper, nitrate of silver or some caustic acid should be applied, and after the surface has been again cleansed a Micajah's Medicated Uterine Wafer is to be inserted in order to keep the parts in an antiseptic condition and to promote healing. Curetting is sometimes necessary.

Do not rely upon tampons as a means of prolonged application of medicaments to the vaginal and cervical mucous membranes. They are too often a delusion and a snare, acting as a foreign body and producing irritation; besides, they are unclean and inconvenient of application. On the other hand, a preparation like Micajah's Medicated Uterine Wafers accomplishes all that a tampon can do and is free from its disadvantages. Owing to its gradual solution the antiseptic and astringent elements of which it is composed are kept constantly in contact with the diseased mucous membrane, and thus a more permanent effect induced. Moreover, the wafers can be readily applied and intrusted to the patient.

WRITE FOR THEM.—Have you a case of indigestion, acute or chronic? If so, write Messrs. William R. Warner & Co. of Philadelphia for complimentary copy of their book, "The Clinical Application of Ingluvin," by John V. Shoemaker, M. D., Professor of Therapeutics, Medico-Chirurgical College, Philadelphia. It is a very interesting book, beautifully printed

on coated paper. Messrs. Warner & Co. are also issuing exceedingly interesting booklets, "The Acid Diathesis," "The History of Sugar-Coated Pills," (of course you know that W. R. Warner & Co. were the pioneer manufacturers of sugar-coated pills), "A Study of Rheumatism," "A Study of Constipation," etc. Any of them will be sent free upon request. Of course each of the books will tell you why it is desirable to specify W. R. Warner & Co. when ordering any of the remedies suggested in the booklets, and the reasons are very good ones. Manufacturing, as they do, the highest quality of pharmaceuticals, physicians certainly secure first class remedies when they specify Wm. R. Warner & Co.

WE CALL the attention of our readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufacturers of high character. We do not hesitate to endorse their preparations as being all they claim for them.

THE NEW ORLEANS POLYCLINIC THIRTEENTH ANNUAL SESSION opens November 20, 1899; closes May 10, 1900. Every inducement in clinical facilities for those attending. The specialties are fully taught. Further information, New Orleans Polyclinic, New Orleans, La.

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Original Communications.

THE TOBACCO HABIT OF WOMEN — ITS EFFECTS
AND CONSEQUENCES.

BY JOSEPH STOLPER, M.E., PH.G., M.D., SEWANEE, TENN.

In observing little things we are often surprised to see what effects they may produce. although they at first seem to be very trifling. Who does not know what tobacco is? Yet how few are they who speak out against the evil results of the use of tobacco, and although this subject is very important from a sociological point of view, it is my object to keep strictly to the medical side of the subject. To show the reader how I came to undertake to study and investigate the effect tobacco has upon the human system, and especially upon women, I will, without intruding upon the reader's time, give a short narrative of the facts that led to it.

A few years ago it was my good fortune to be brought by fate to a place in the State of Tennessee, which could justly

be called the paradise of the State. Situated upon a mountain about 2,000 feet above the level of the sea, and some 1,000 feet above the surrounding country, it majestically overlooks the valleys below, and seems to be the king of the locality, and the splendid forests with which it is surrounded seem to be created by the mighty hand of nature to serve to the king mountains as a personal bodyguard.

Upon this beautiful spot of Southern soil is situated a small city, town or village—I am not sure what I shall call the place, but whatever it may be called will suit the place, for in learning and men of science it does rival a city; in gossip, a town, and in the small number of inhabitants it is a village. But no matter what it may be, I was puzzled and astonished by one fact, which, although it at first seems to be a trifle, yet has proved to be the effect of a cause which has very deplorable and injurious effects: namely, I was astonished to observe that in a place, which to all intents and purposes, has been endowed with all the gifts of nature, a healthy climate, good clean water, a scenery which would compare favorably with the finest scenes of Europe—in this place where life was to be seen in full vigor in the vegetable and animal kingdom, I was puzzled why the women of the place had a pale, yellowish face, which showed clearly that there was some cause that strained their vital forces. It was a prominent and phenomenal contradiction to the surrounding life, and such a face as a traveler sees in Germany, and even in the poorest Russian village was not to be seen.

After awhile I came to be consulted by the fair daughters of the mountains in a professional way. I found that my patients, women of the middle class, were almost all suffering from neurasthenia, and there was a general leakage of nerve and vital force, with all such evils as usually accompany such conditions in women.

Here I had to deal with what was evident to me, an effect from a general cause which produced the train of the symptoms stated, but the cause was a thing no patient ever gave a hint upon. My patients were mostly, what in a village are called the well-to do working people; all lived comfortably, all had the necessary commodities of life, and almost all had

their own domestic animals, lived in a healthy climate, and having to do their own house-work, they could not be suspected of living too luxuriously, as they have had enough of exercise in doing their work. Now, why then, in the conditions I have stated, where apparently all requirements of hygiene were present, except health itself, why did health absent itself so conspicuously?

I knew the cause was somewhere, and I began to look for it. The result was that I discovered that the women of the place were, as a general rule, *addicted* to the *tobacco habit*—that is, not smoking, but pulverized commercial tobacco, generally known as *snuff*, is taken in the mouth, where it is kept till it becomes entirely a fluid, being dissolved by the saliva, and then is thrown off. Before taking up the considerations of the effects of such a use of tobacco, let us first see what are the chemical constituents of tobacco; and the physical behavior of tobacco when used as either chewing, or what is popularly called *dipping snuff*. The chemical composition of tobacco, as given by Prof. W. H. White, M.D., F.R.C.P., in his "Materia Medica, Pharmacy, Pharmacology and Therapeutics", third, P. Blankiston's edition, page 349, is as follows:

TABLE A.

- | | |
|--------------------------------|--|
| 1. Nicotine, $C_{10}H_{14}N_2$ | 7. Coridine, $C_{10}H_{15}N$. |
| 2. Pyridine, C_5H_5N . | 8. Rubidine, $C_{11}H_{17}N$. |
| 3. Picoline, C_6H_7N . | 9. Hydrocyanic Acid, Hcy. |
| 4. Lutidine, C_7H_9N . | 10. Acetic Acid, $HC_2H_3O_2$ |
| 5. Paroline, $C_9H_{13}N$. | 11. Creosote, $C_8H_{10}O_2-[-C_7H_8O_2-[-C_8H_{10}O-[-$ |
| 6. Collidine, $C_8H_{11}N$. | 12. Sulphur, S_2 . |
| | 13. Carbon compounds. |

Although the series of the composition of tobacco as given here is very interesting from a chemical point of view, all except the first on the list—nicotine—are of no importance to the subject of this paper, as it is a fact agreed to by all authorities that the effect of tobacco is due entirely to the nicotine it contains; therefore let us see what is nicotine, and what properties it possesses, and what effect it has when taken in the animal economy.

Nicotine is one of the main constituents of tobacco. The amount of it found in different kinds of tobacco varies, as can be seen from the following estimate:

TABLE B.

The amount of nicotine in ordinary tobacco, as given by—			
W. H. White, M.D., F.R.C.P.,	from 0.7 to 5.211	per cent.	
R. A. Witthaus, A.M., M.D.	“ 2.0 to 8	“	
C. H. Leonard, A.M., M.D.	“ 2.0 to 10	“	

From Table B it can be seen that the percentage of nicotine found in tobacco is quite large in comparison with the remaining compounds found in Table A, which are found in small quantities.

Now, having the amount of the active principle of tobacco, let us see what properties this active principle has, and what it is.

Nicotine is a colorless, oily, volatile alkaloid, turns brown upon being exposed to air or light. It has a burning, penetrating, caustic taste and odor, sp. gr. 1.027 at 15° C., is very soluble in water, alcohols and oils; it absorbs water from moist air.

Having so far seen what tobacco and its active principle are, let us now proceed to see what effect tobacco has upon the animal economy.

The primary effect of tobacco or nicotine, when first used, is to stimulate the involuntary muscle fibres and the secretory glands, as also the excretory organs of the animal body, to increased action; which, following the well-known law that the drug which at first stimulates an organ to increased action will, if used for a time, finally become a depressant. This is exactly what we find is the case with tobacco. It at first stimulates, then depresses, the activity of the animal. To show how tobacco is received by the animal cells I have collected some specimens of the much-abused ameba, and, first stimulating it with a few drops of saline solution to induce the ameba to throw out some pseudopodia, and by tapping the slide, I brought the ameba in contact with a minute particle of tobacco. It was interesting to notice how, after surrounding the particle and finding it unsuitable for itself, it at once began to move in its well-known way away from the particle; but when the same

experiment was repeated, instead of using a solid particle of tobacco a few drops of a saturated solution of tobacco was used—enough to occupy the whole space of the cover-glass. The changes were remarkable. It at first became elongated, then turned into a ring, the ring finally breaking up into pieces, each piece running together into a spherical mass and remaining so—evidently dead, as no amount of stimulation could induce a sign of vital phenomena to appear.

Leaving now for awhile the individual cell, I will take up systematically the consideration of the effects of tobacco upon the different systems of the animal economy.

When first taken in the mouth it stimulates the secretions of the salivary glands and causes abundant flow of the saliva. The saliva, with the amount of water it contains, acts as a solvent upon the tobacco, dissolving out the very soluble nicotine. The nicotine, coming in contact with the taste ends upon the tongue, evidently sets up a battle for existence of their cells, and the effect is that the taste-buds become hypertrophied first, and subsequently shrink and atrophy, thereby destroying the sense of taste.

Let some doctor take the trouble to examine the tongue of an individual who has been in the habit of chewing tobacco for a long time, and he will find that such an individual's tongue is flabby, large and yellow. If it is seen during the period of hypertrophy, the taste-buds—especially the circumvallate papillæ—are very much enlarged. Let such a person stop using tobacco at this time, and the tongue will become normal again; but if it goes on to the state of atrophy, then—even if the use of tobacco is given up—the sense of taste is entirely lost.

I happened to see a case which demonstrates the effect of tobacco upon the sense of taste. A woman who was addicted to the use of tobacco was serving as a cook in a family. The foods that she prepared were almost saturated with salt; yet she insisted that she could not taste any salt in the food. I finally examined her tongue, and found its condition as described above—that is, the sense of taste destroyed by the use of tobacco.

She was telling the truth—she could not recognize the taste of salt.

When the use of tobacco has been continued for a long time, and the period of stimulation is over, the depressing effect begins. The salivary glands meet the same fate as all other glands in the mouth, and the result is that their secretion becomes poorer. ptyalin is secreted very little, if any, and consequently starchy foods are sent to the stomach not elaborated by the saliva, and reach the gastric juice in a condition unsuited to the gastric juice. The vegetable proteids and the food are passed without change in the stomach, for the reason that what has happened in the mouth takes place in the stomach.

The food containing nicotine passing from the mouth through the esophagus at first stimulates the involuntary muscle fibres then relaxes them, impairing their resisting force, and thus creates in this important passage a condition which would favor an inflammatory process, and therewith favoring the beginning of morbid growths.

When the food containing the minutest portion of nicotine reaches the stomach its irritative nature so powerfully stimulates the coats of the stomach that it, both by the spasmodic contraction and powerful peristaltic movements, produces nausea and vomiting; but when tobacco has been used for a period of years the muscular coats become relaxed, peristalsis weak, and the pylorus open, allowing the free passage of any foods—even proteids; the cardiac and pyloric glands at first become hypertrophied, then atrophied. The gastric juice—which was at first secreted more than normal—is lessened, if anything; the inside of the stomach is covered with a thick, tenacious mucus, and the patient becomes a sufferer from chronic dyspepsia, pyrosis, etc. In the intestines the same changes take place as in the stomach, and the first stimulation is so powerful that Nasse in his experiments (*Beitrag Phys. der Darenburegung*, Leipzig, 1866) found that nicotine produced tetanic contractions of all intestines, which he proved were of a local and not nervous origin.

The peristaltic movement later becoming weaker and weaker, the patient begins to become constipated, so that finally the bowels refuse to move at all; and I know such patients who are compelled to depend upon some purgative every day in their life.

During the time that the above-stated changes take place in the alimentary canal the assimilative system suffers both from the food being unprepared for absorption and from the abolishment of the absorbing surfaces by changes that take place in the alimentary canal. The circulatory system comes in for its share, as every other system in the body; the vessels are affected in the same way as the intestines, hence from the stimulating effect arterial pressure rises at first, then when the relaxing effects begin there is a general fall of arterial pressure, and as an index of it the pulse falls, becomes softer and slower and the injured walls of the vessels are ready to become inflamed at the first opportunity, thus favoring arterio-capillary fibrosis and the consequences following such conditions.

The heart is affected by long-continued use of tobacco, as all involuntary muscles are; and that the effect is local can easily be proven. That an excised heart when stimulated with nicotine will bring on systolic contraction was first proven by DeBenham (West Riding Lunatic Asylum Report, vol iv, 1874). Hence it is evident that the first effect of stimulation will produce tachycardia, and D. E. Hughes, M.D., gives tobacco, when used in excess, as one of the main causes of tachycardia.

But the next is the depressing effect, and the relaxation of the heart muscles brings the opposite result—that is, brachycardia, favoring the formation of thrombosis and embolism, and—what is as bad—brachycardia gives rise to congestion of the brain, the portal and the renal systems.

But of all effects tobacco has upon any part of the circulatory system, the most interesting is the effect it has upon the individual blood corpuscles. Here when nicotine reaches the red blood corpuscles the fight between the alkaloid and the red corpuscles is for life and death, and the result depends upon the time which nicotine has been used, and the amount of the dose used.

I am aware that Prof. H. C. Wood, M.D., is of the opinion that the red blood corpuscles and the blood in general are not affected in nicotine poisoning. That is perfectly true, but the reason for this is that the dose of nicotine which kills is

so small and if the reader will turn to Table A and see the amount of carbon contained in nicotine, it will become evident that nicotine kills by virtue of the carbon it contains through interfering with hematosiis. Hence, when it is due to the pure alkaloid that death has been caused, and the blood is seen immediately after death, the changes, although they are present even then, are not distinct. But even then Dr. Hare has observed a change in the spectrum of hemoglobin, and he affirms (as quoted by Prof. Wood) that after large doses, microscopic changes in the red blood corpuscles can be seen.

The last statement of Dr. Hare is fully in accord with the results of my own investigations. If, instead of using nicotine, minute doses of pulverized tobacco are given to an animal for a period of time, the red corpuscle disintegrates in the living vessel.

Upon the leucocytes, tobacco has the peculiar effect of increasing them, both in number and size—a thing which I cannot find mentioned in any text-book; and so far as I know the effect of tobacco upon the leucocytes seems not to have been noticed before.

The respiratory system is the one which answers promptly to the effects of nicotine. Here, as elsewhere, the irritative action of tobacco sets up inflammatory conditions, and when nicotine is given in a dose sufficient to cause death, it kills by depressing (what Flourens calls *neudvitale*) the respiratory centre.

The abdominal organs suffer both from the direct irritation of the effect of tobacco and from the passive congestion due to the inability of the heart to perform its normal functions. Especially is this remarkable in the effects it has upon the internal reproductive organs of the female, but that I will speak about after considering the effect of tobacco upon the nervous system.

If I were asked which particular tissue or organ in the human economy suffers most from the injurious effects of the habitual use of tobacco, I would not hesitate to answer that of the tissues the nervous tissue suffers most, and of the organs the eye and the reproductive organs of the female, are those which—no matter what the condition of the other parts—never escape without being injured.

The experiments of Hare, Rosenthal, Vulpian and Krockner have definitely shown that the functions of the motor nerves are always and permanently abolished through the use of nicotine. Lautenbach (as quoted by Wood) states that the sensory nerves are also affected, and my experiments prove that this is true.

Upon the brain, Drs. Wood and White both agree that nicotine has but little effect; but I have noticed that those who habitually use very much tobacco (chewing or dipping) suffer from loss of memory. In one instance this effect was so apparent that the person was aware of the defect of memory, so that she did not trust herself to remember the most trifling thing.

That tobacco interferes with the nutrition of the nerves, as well as of the whole body, is proven by the total nervous exhaustion and the general neurasthenic condition of those who use it very much.

Having shown the effect of tobacco upon the nervous system, it will become evident why the effect of tobacco is so injurious to the eye. It is a well-known fact that retrobulbar neuritis is always caused by the use of tobacco (*Diseases of the Eye*, Gould and Pyle). Dr. Deschweinitz, speaking about toxic amblyopia, states that "atrophy of the nerve may result." But of all, the following is as emphatically and definitely spoken as it is instructive:

E. Nettleship, F.R.C.S., writing concerning the effect of tobacco on the eye in his "*Diseases of the Eye*," edited and revised by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., fifth edition (Lea Bros.) p. 440, says: "There is no doubt whatever that tobacco, whether smoked or chewed, does act directly upon the optic nerve, and in such a manner as to give rise to definite and usually very characteristic symptoms. The amblyopia seldom comes on until tobacco has been used for many years." Again, on page 270, writing about amblyopia, Nettleship says:

"My own opinion, based on the examination of a large number of cases, is that tobacco is the essential agent, and that the disuse, or greatly diminished use, of tobacco is the one essential measure of treatment"

The above needs no comment to show what effect tobacco

has upon sight through the nervous system, while the effect tobacco has through the same avenue upon the female reproductive organs is enormous in the suffering it causes.

That the supply of nourishment (blood) to the reproductive organs, as to all parts of the body, is regulated and presided upon by the nervous system, is a well-established fact. Now, when due to the effects of a long-continued use of tobacco, the nerve force is exhausted, it is evident that the nervous control over the blood supply being impaired, the supply of blood to the different organs of the body will be abnormal and irregular. Especially is this true about the reproductive organs, which get their blood supply from tributary sources. The abnormal supply of blood will tend to cause inflammation of the reproductive organs, which by virtue of their physiological functions easily take on inflammation. But the worst is that excessive use of tobacco causes the existence of all conditions that predispose, and if existing for a continued length of time will actually produce prolapsus of the womb, a condition of frequent occurrence and justly dreaded by all women.

Now let us see how the excessive use of tobacco favors prolapsus of the uterus.

I believe I have made it plain that the effect of tobacco upon the involuntary muscles of the body is at first stimulating, then relaxing. Now, if we bear in mind that any condition which increases the weight of the uterus weakens the uterine supports and at the same time causes pressure from above, we see that these causes produce all that is necessary to bring about prolapsus of the uterus. So let us see if all the conditions for prolapsus of the uterus are present from the excessive use of tobacco.

The irritation of the tobacco will set up a low form of inflammation, and the irregular blood supply—due to the loss of nervous control—will cause the congestion of the organ. The relaxation of the walls of the uterus will produce a state of flexion, bending the uterus and thus causing the menstrual blood to be retained in utero, which will increase its weight by retaining the fluid. The relaxing effects of the tobacco acting also upon the uterine supports will weaken their supporting power, and the congested viscera from above, to-

gether with the patient straining at stool—due to the constipating effect of the tobacco—will furnish pressure from above, and all united will produce prolapsus of the uterus.

Having seen the effects of the excessive use of tobacco, let us see what are the consequences of the habitual use of tobacco.

The consequences are that a mother who habitually poisons her economy with tobacco will give birth to sickly, mal-developed babies, as the baby had to depend during all its life in utero—from the time the vitellin food gave out—upon the mother's blood to supply nutrition. And it is reasonable to expect that such an infant, with defective vital forces, will not be fit to struggle through the common diseases of infancy and childhood.

But, more than only being physically mal-developed, such an offspring from a mother—and sometimes from both parents—addicted to the use of tobacco, chewing or dipping, and suffering from neurasthenia, has in him or her all predisposing conditions for diseases of the mind.

In order to show what influence neurasthenia in one or both parents has upon the minds of their children, it may be interesting to consider such an authority as Dr. A. Cullere, who, writing about the etiology of hereditary insanity, says :

"La folie héréditaire est le resultat de l'hérédité accumulée et progressive. Sans vouloir rechercher les liens qui unissent les affections nerveuses aux autres maladies chroniques, nous admettons avec la plupart des auteurs qui ont spécialement étudié ce point de clinique, que le principe hereditaire psychopathique prend sa source dans le etats neuropathiques ou neurastheniques des ancestres."—*Traite Pratique de Maladies Mentales*, Paris, 1890, p. 278.

From what Dr. Cullere says it is evident that the whole progeny of neurasthenic parents is liable to hereditary insanity; and who would think such grave results are the outcome of the habitual use of tobacco, which seems to be a trifling thing?

After what I have said about the effects of the tobacco habit on women, I would not be surprised to have such a question as the following addressed to me:

“Dr. Stolper, from what you have written about the effects of tobacco, which is a universally-used article in everyday life, it is evident that you blame the use of tobacco for the greater part of all the evils to which human flesh is subject. Why, then, has not more trouble in general practice and in the clinics been attested to be due to tobacco?”

To such a question I would answer—

Because the effects I have described manifest themselves only after a long period of time, and as life is short some individuals will pass their natural life before the effect of tobacco manifests itself upon them. That the quantity needed to produce the symptoms is *certeteris paribus* a matter of idiosyncrasy, a very small quantity may produce alarming symptoms in one, while in others enormous quantities may be necessary to produce any effect.

Again, much depends upon the manner in which tobacco is used, and the quality of the tobacco. Chewing and dipping are more injurious, because the tobacco is taken in the mouth; the nicotine being very soluble, some part of it is retained in the body; while when smoked—nicotine being volatile—the greater part of the alkaloid is volatilized. It is self-evident that strong tobacco is far more injurious than the milder kinds.

Finally, the cause existing, the effects sooner or later manifest themselves; but the doctor not being let into the secret that tobacco is used (especially if the patient is a woman), or if he knows that it is used he may not consider that there is connection between the use of tobacco and the diseases for which he was consulted, but will take one of the effects of the use of tobacco as the cause, treat the effect as the cause, and so lose the original cause from view.

These are the reasons why the effects of the use of tobacco have not attracted the attention which they fully deserve.

A CASE OF PARTIAL INTESTINAL OBSTRUCTION WITH FECAL IMPACTION.

BY R. E. FORT, M.D., NASHVILLE, TENN.

The case of intestinal obstruction reported in the December number of this journal prompts the report of the following case, which has many features in common.

D. McG, aged 48, of unusually robust and muscular physique, entered Nashville Hospital April 6, 1899, with the following clinical history: Had enjoyed perfect health, except a stab wound in right iliac fossa some twelve years before, until night of April 4, when he was awakened with pain in abdomen of a colicky nature, followed by repeated attacks of vomiting, intensified upon an attempt to take food or water. These conditions continued at intervals during the day and night of the 5th. No bowel action since the 4th. When admitted to hospital at noon of the 6th his pulse was 72, respiration 24, temperature 98.4°. There was slight abdominal tenderness and a moderate degree of tympany; paroxysms of colicky pains and vomiting continuing at intervals. Further than the tympany, percussion was negative. Ten grains of calomel were given, followed in six hours by a high enema of warm soapsuds, with slight result. Patient rested fairly well during the night.

On the 7th, at 4 a.m., pulse was 92, respiration 32, temperature 98°; condition not improved. An ounce and a half of magnesium sulphate was given by 8:45, followed by high enema, senna infusion 1 qt., turpentine 1 drachm.

8 p.m., pulse 94, respiration 20, temperature 98.8°; highest temperature during the day was 99.4° at 11 a.m. Slight bowel movement during afternoon. Suffering at 8 p.m. Morphine gr. $\frac{1}{4}$ given, followed in half an hour by castor oil 2 ounces, turpentine 1 drachm, whisky 1 ounce. Rested badly during night.

On 8th, at 4 a.m., pulse 100, respiration 22, temperature

100°. At 10:30 a.m., a high enema of senna infusion 1 quart, magnesium sulphate 4 ounces, turpentine 1 drachm, which he was forced to retain for half an hour, resulting in a large bowel movement. Late in the afternoon there was another very large action—so large that it showed a fecal impaction—followed by marked shock, temperature falling from 100° to 98°, pulse 100 but very weak in contrast with the strong, full pulse which he had had all along. Strychnia sulph. in $\frac{1}{16}$ -gr. doses was given hypodermically at 7, 10, 2 and 6 o'clock, and tr. digitalis minims 20 hypodermically at 8, 12 and 4. At 1 a.m. temperature was 96.4°, pulse imperceptible; never re-acted; died about 6:30.

Necropsy revealed an adhesion of the ilium to the anterior abdominal wall at the site of the old stab wound, occluding about three-fourths the calibre of the gut. It will be seen, therefore, that the obstruction was not complete. With the exception of a considerable amount of gas, no other pathological condition was found.

The cause of death was certainly shock—not exhaustion. What produced the shock? I can offer but one explanation.

The large amount of feces, assisted by gas pressure, had forced the blood out of the splanchnic and abdominal anemia, to which the circulatory system had accommodated itself. Immediately upon the removal of these foreign bodies there was an influx of blood to this large area of blood vessels, producing a general anemia, shock and death, as we have following the removal of large quantities of ascitic fluid, ovariotomies, etc.

This did not appeal to me with as much force at the time as it has after the necropsy and more mature deliberation; and I regret that in addition to the methods used in combating shock I did not add posture, bandaging the lower extremities, the abdominal compress, and large quantities of saline infusion.

Certainly the result of purgation and enemata, reinforced by the revelations of the necropsy, confirms the opinion that operative interference was not warranted.

If my premises are well taken in the foregoing case, I would suggest that the same would apply to the case reported by Dr. Briggs.

Selected Articles.

TEN YEARS' EXPERIENCE WITH ALEXANDER'S OPERATION.

BY A. LAPHORN SMITH, B.A., M.D., M.R.C.S. (ENG.).

Fellow of the British and American Gynecological Society; Professor of Clinical Gynecology in Bishop's University; Gynecologist to the Montreal Dispensary; Consulting Gynecologist to the Women's Hospital; Surgeon-in-Chief of the Samaritan Hospital for Women; Surgeon to the Western Hospital, Montreal, Canada.

The suggestion to write this paper has come to me from having just received and read with great pleasure an interesting little work entitled "Practical Gynecology, with Fifteen Years' Experience of the Operation of Shortening the Round Ligaments," by Dr. William Alexander of Liverpool, to whom we are indebted for the introduction of the operation. In his book the author refers to me as having performed "fifty-three Alexander operations, in which four had children afterward, with no return of the retroversion, three were failures; all the others remained in good position. A few were no better for the operation because diseased ovaries remained, which would have been removed if ventrofixation had been done." That was in 1896, and since then I have done thirty-eight more, every one of which has been successful. The more I perform the operation the better I like it; no other operation, except ventrofixation, gives so much satisfaction to both patients and operator. Indeed, if I could feel as

Dr. Alexander does, that the operation was adaptable even to cases of retroversion with adhesions, I would prefer it to ventrofixation, as there is no comparison between them in freedom from danger. But I have always drawn a hard and fast line between the two classes of cases, and whenever I had the slightest doubt about the perfect mobility of the uterus I have opened the abdomen and freed the adhesions. Sometimes I have found the adhesions very slight and easily broken, and a few times I have not found any adhesions at all. In these cases I might have cured the patient by an Alexander operation.

In other cases I have met with adhesions of the retroverted uterus so dense that even with my finger in the abdomen it has taken all my strength to break them, and in these cases I should think that an Alexander operation could not possibly be successful. Of course, Alexander always treats these cases of adhesions until they are softened down before shortening the ligaments.

Do we ever fail to find the ligament? This is a question which I am often asked by visitors to the Samaritan and Western hospitals, who remark upon the ease with which I find the ligaments. In reply I may say that since I have adopted my present method of operating I have never had much trouble. During the first year that I was performing the operation the ligaments in one case were frayed out on both sides and broke off so I was obliged to at once perform a laparotomy and ventrofixation. In another case the ligaments broke off inside of the abdomen between the folds of the broad ligament, and I had to open up the inguinal canal (which I am always loth to do) and, slipping a pair of Pöean forceps into the internal ring, seize the remainder of the ligament, drawing it up and fastening it to the internal ring, the operation resulting in a perfect success. In two other cases one ligament broke, but the other was good and strong, and the uterus was anchored by it and remained up ever since. But I have had none of these troubles since seven or eight years, when I adopted the following method of operating: First I feel with the left finger for the internal inguinal ring, pressing firmly down on to the spine of the pubis. I then cut down over this spot

through the skin, superficial fascia, fat and deep fascia, and then lay down my knife. All the trouble that I have had in those early cases, and all the misery that I have seen distinguished operators enduring, in different parts of America and Europe, while spending an unhappy hour in a vain attempt to find the ligaments; and all the hernias which have done so much to discredit a really good operation—all these misfortunes have been due to keeping the knife or scissors in the hand one instant longer than I have mentioned, namely, after the shining white fascia of the internal oblique has been reached. The rest of the operation should be done with the finger only, aided by a pair of rather weak and smooth Poean forceps, which, while closed, are glided gently into the canal a distance of half an inch. The intercolumnar fibres which keep the pillars of the ring together and are nature's safeguard against hernia, must not be cut if it is possible to avoid it. If the forceps are too strong and have sharp cutting grooves in them, they may cut the round ligament right off. The forceps must only be used to draw out the first part of the ligament until we have enough to catch in the finger tips. Take great care to gather up the whole of the thin, fan-like expansion by which it is inserted into the pubic bone, and pull steadily until you see the round white cord surrounded by some thin membranous tissue, which is easily pulled off, when the cord will glide freely out. The only trouble that I have now is that occasionally there is a tendinous expansion going from the ligament out to the pillars, which prevents it from pulling out freely. Sometimes this is so strong that it must be cut. Alexander does not touch the sleeve of peritoneum (or really broad ligament), which is drawn out with the ligament, but I think that it should be peeled back, as this enables us to draw the ligament nearly an inch further out. There is no danger of opening the peritoneal cavity by doing so.

Should hernia ever occur after Alexander's operation? Not only do I think that it should not occur, but I do not see how it can if the operation is properly performed. I have done ninety-one, some of them ten years ago, and have seen or heard from most of them since, and I am certain that in

none of these has a hernia occurred. But one well known operator in this city has had 100 per cent. of hernia, having attempted the operation only once and, having lost his way, abandoned the operation without having closed the opened-up canal.

Another well-known operator, who did about sixty operations, had 30 per cent. of hernias, and although I have never been present at his operations I have been told that it was his practice to split up the canal in its whole length—when, of course, hernia is almost sure to occur. These cases of hernia after Alexander operations going about the city have discouraged many suitable cases from allowing me to do the operation for them. As I have already mentioned, I take the greatest care not to hurt the intercolumnar fibres which hold the pillars of the external ring together. Another reason why I have had no hernias, and even in a few cases cured them when already existing previous to the Alexander, is because I have always anchored the round ligament with two or three buried silk-worm gut sutures, which at the same time pass through the two pillars of the ring and which, when tied, support them so that hernia is an impossibility. Alexander, however, in his work, says that he has abandoned this practice, and now only uses a single silk-worm-gut stitch, which he removes in fourteen days.

The Alexander Operation as a Cure for Diseased Ovaries.—When the uterus becomes retroverted the ovaries fall into Douglas' cul-de-sac, and then they begin to labor under difficulties, the first of which is bad circulation. This may be because the broad ligaments are twisted, and there is consequently a partial torsion of the ovarian veins, the blood being pumped into the ovaries, but not being able to get out of them; or it may be due to reflex action, owing to the constant thumping of the retroverted fundus upon the ovaries. We all know that prolapsed ovaries are heavy ones, although it is not always easy to say whether they are prolapsed because they are heavy, or whether they are heavy because they are prolapsed. But one thing is certain, that as soon as these ovaries are brought up—the result of Alexander's operation pulling the fundus forward—the ovaries begin to recover

themselves. I have observed this result in many of my cases, both of Alexander's and of ventrofixation, although in a few cases, where I have left diseased ovaries which I thought were bad enough to remove, but which their owners refused to part with, the result has been disappointing; the disease was too far advanced to permit of their recovery, even under these more favorable conditions. Alexander states that even when there are cobweb adhesions binding down the ovaries in the pelvis, he still does not hesitate to perform his operation, and he claims that these adhesions will be absorbed with, or sometimes without, treatment. In this I think he is mistaken. Judging from the difficulty I have experienced in breaking them up, even when I have had my two fingers in the abdominal cavity, I feel certain that these adhesions are never absorbed. It may be, however, that they may stretch; in fact, I have, after months of treatment with iodine applications to the vaginal vault and packing with boroglyceride tampons, succeeded in getting the fundus up out of Douglas' cul-de-sac. A pessary is badly borne in these cases, probably because it presses on the ovaries, which cannot escape from the pelvis, and I have never intentionally performed an Alexander operation when I was not perfectly certain that there were no adhesions. When there are adhesions we may always rest assured that the tubes are diseased, and that their leaking into the peritoneum is the cause of the pelvic peritonitis, with its effusion of lymph, the organization of which into fibrous tissue causes the layers of cobwebs or veil-like adhesions, which are sometimes so difficult to break. For all such cases I prefer ventrofixation; first, because it enables me to break up the adhesions and to thoroughly free the ovaries and tubes, so that when the uterus is brought up into the forward position there is no strain upon it; and secondly, because it enables me to deal with the ovaries and tubes on sound general principles—namely, to remove them if they are hopelessly diseased, or to cut out the diseased portion if there is a hope of saving the rest.

Alexander's Operation as a Cure for Sterility.—I have been surprised on examining several hundred women who came to me, principally for sterility, to find that a large number of

them had retroversion, and the fact that many of them became pregnant as soon as the womb was placed in good position would seem to prove that the forward position of the cervix is alone sufficient to prevent the seminal fluid from entering the womb. There are many who think that a single spermatozoid entering the vagina is sufficient to cause pregnancy, but while this may be true theoretically, I am convinced that it is not so practically, and in the majority of cases it is necessary for the seminal fluid to be injected into the cervical canal. This is the only explanation that I can give for the fact above mentioned, that without any other treatment whatever, either medical or surgical, many women have become pregnant after a simple reposition with the finger. Others have become so only after keeping the womb up with a pessary for several months, while others again did so only after it had been kept in good position permanently by shortening the round ligaments. Every few months some patient comes to my office to report to me that she has had several children since I performed the Alexander operation, although she had been married several years before this was done, without becoming pregnant. One case was reported to me by a medical friend here—that of a girl who had been having illicit intercourse with her lover for several years without any consequences, until she consulted her physician for a pain in her back. He examined her and found the uterus retroverted. He sent her to me and I performed Alexander's operation, with the result that immediately on her return to her lover she became pregnant and has since been delivered.

Alexander's Operation for Prolapse.—As is well known, prolapsus uteri begins by a retroversion which allows the bowels to fall in front of the uterus and to push the latter further and further down, until, if the perineum is lacerated, the organ finally comes out of the body. Contrary to some, I hold that shortening the round ligaments contributes very considerably toward curing this condition; not only because they can hold the weight of the uterus (which they were not intended by nature to do), but because they pull the fundus forward, thus making the intra-abdominal pressure fall upon the back of the uterus and pressing it forward onto the sym-

physis pubis, where it can support any weight which it may be called on to carry. I have cured a large number of cases of prolapsus by doing, first, a dilatation; second, a curetting; third, amputation of a lacerated and hypertrophied cervix, then a perineorrhaphy, and then shortening of the round ligaments. In all of these cases the results have been excellent, although the patients have never worn a pessary since the operation. In fact, I have not made it a practice to leave in a pessary after my Alexander operations, feeling sure that it would be impossible for the uterus to fall back after I had anchored the ligaments with the buried suture. But my experience with buried sutures has been like Alexander's—namely, that they sometimes (in almost 10 per cent. of cases) suppurate and have to be removed. He has, therefore, abandoned them, and uses instead a single through-and-through silk-worm-gut suture, taking in the skin, pillars of the ring, and the round ligament. I will in future follow his suggestions as well as employing a pessary temporarily to take the strain off the ligaments until they have become firmly attached to their new anchorage. Apropos of this, Alexander says: "If the round ligaments only are shortened and the cervix and lower part of the fundus are allowed to swing downward during the healing of the wounds and to approximate to the vaginal outlet, very little consideration will be necessary to show that the ligaments are dragged upon during the healing process by the weight of the uterus, so that imperfect union of the ligaments may take place, and that, at any rate, the recovered tone of the sacro uterine ligaments will not result. Many failures are no doubt due to this cause, and I do not think that the operation has been properly performed unless a pessary has been used." He also says that it is better not to remove the pessary for nine weeks. I might mention here that I used this method of anchoring the ligaments with two or three through and through silk-worm-gut stitches in my first ten cases, but abandoned it in favor of buried silk-worm gut because I had a failure. But this may have been due to my not having using a pessary to throw the fundus forward until the shortened ligaments had time to become firmly attached.

Antiflexion with Retroversion.—I have done Alexander's operation a few times for this disease, which is not one that is generally recognized. In this condition the cervix and fundus both point forward and upward, we can feel far up the back of the uterus with the examining finger, and the whole organ lies low in the pelvis. If such a uterus were straightened without disturbing the cervix, the fundus would point backward. These cases have generally been considered intractable, but I think that we might easily cure them by following Alexander's suggestion in cases of retroflexion—namely, to dilate, curette, introduce a galvanic stem pessary and a Hodge, and then to perform Alexander's operation. I believe that this would give brilliant results, and I will in future treat these cases in this manner. I am inclined to think with Alexander, that there is some virtue in the galvanic stem—more than is generally supposed; at any rate, its presence in the uterus would at least stimulate contractions in the weakened walls of the muscular tube, which is the prime cause of the difficulty.

Retroflexion with Retroversion.—Alexander says: "In all aggravated cases of retroflexion a stem pessary is necessary in addition to a Hodge, not only during the process of healing of the wounds, but for three weeks after operation."

Although I have always had a horror of the stem pessary, having had one or two bad experiences with it twenty years ago, and although it is very seldom used by gynecologists at the present day, still I think that Alexander proves the necessity of using one when there is a bad retroflexion as well as retroversion. In all his retroflexion cases he uses a galvanic stem pessary in addition to the Hodge, because this type of pessary is well known and easily procured in England, "and the galvanic action is not a contra-indication." He says he has not found any serious objection after many years of their use in this operation. When they are removed they are generally incrustated with salts, and the os and uterine canal are well dilated, but no evidence of metritis has been observed. It must be remembered, he adds, "that the patients remain at rest in bed during the entire period of its use, and under the charge of a nurse: under less strict conditions of rest and care a stem pessary is no doubt a dangerous instrument."

Other Methods of Shortening the Round Ligaments.—The two principal ones, other than Alexander's, are by abdominal incision and by vaginal incision. I have never employed either of them, for the simple reason that I consider that the whole object, or *raison d'être*, of shortening the round ligaments is to bring the uterus permanently forward without opening the abdominal cavity. When there are no adhesions and the uterus can easily be brought forward, Alexander's operation does all that is required with the minimum of risk. If there are adhesions, and the peritoneal cavity has to be opened in order to break them up, then ventrofixation is the best operation. I have done vaginal fixation several times and obtained excellent results, but in my last case it was utterly impossible to separate the adhesions of the back of the uterus, and I was obliged to sew up the vaginal incision and to complete the operation by the abdomen. And here I would like to digress a little from the subject proper to say that there is no valid objection to ventrofixation, if reserved for the class of cases referred to. First, if properly performed only the top of the fundus is anchored, all the rest of the organ being free to rise and fall with the filling and emptying of the bladder. Second, in many of my cases the fundus did not remain absolutely fixed and adherent to the abdominal wall, but has from half an inch to an inch of play, being merely anchored by a ligament formed by the stretching of the new tissues of the adhesion and the cutting out of the ligature. Third, the objection that pregnancy would be interfered with when the uterus is fixed is not an argument against ventrofixation, but is a strong argument in favor of Alexander's operation, because ventrofixation should only be employed when the uterus is fixed backward by hopeless disease of the tubes, and when, consequently, the woman is sterile. The Alexander operation is the only one which should be performed when the tubes are healthy, and when, consequently, the uterus is movable, and there is therefore a possibility of pregnancy. Alexander's operation is a minor operation; opening the abdomen is a major operation and has a death-rate, although very small, and it should never be employed when the minor operation would cure the patient equally well. That shortening the

round ligaments is more difficult than doing ventrofixation is no reason for risking the patient's life unnecessarily; for with practice and skill the round ligaments can be found and drawn out with the eyes shut, if their membranous insertions be not frayed out with forceps or cut with the knife or scissors, the fingers being alone used.—*N. Y. Lancet*.

"AN UNDOUBTED CASE OF SUPERFOETATION."

The *Medical Review of Reviews* for Oct. 25, 1899, quotes, under the foregoing heading, the following case:

Herz (*Wiener medicinisch Presse*, 1899, No. 36) describes the case of a woman, aged 22 years, married for the past year. Menstruated several times after marriage, but amount scanty. Menses ceased at fifth month after marriage.

The time of the first menstruation after marriage was in mid-December, 1897; on Sept. 21, 1898, the patient bore a healthy, fully-developed child. In delivering the placenta the midwife's hand encountered an object within the uterus which she believed to be a second foetus. Nothing further was expelled, however, and the patient made the usual recovery. Upon getting up, the presence of a uterine tumor was readily made out.

Six weeks after the birth of the first child the mother again felt life; in fact none of her people appeared to have any doubt that a second foetus was in the womb. The health, which had unmistakably failed at the time of the actual cessation of the menses, had become strikingly worse after the birth of the first child. Herz first saw the patient on Jan. 18, 1899, (four months after the birth of the child), diagnosed superfoetation, and proceeded expectantly. The patient, however, became worse, and died on Feb. 10, in the ninth month of the pregnancy. Her people made no attempt to send for medical aid, on superstitious grounds, although emptying the uterus might have saved the mother. Death occurred from suffocation. The most severe symptoms during life had been œdema of legs, dyspnoea, and refusal of nourishment.—*Medical Journal*.

Extracts from Home and Foreign Journals.

SURGICAL.

RETRACTION OF THE PLANTAR APONEUROSIS.

Fere (*Revue de Chirurgie*, September, 1899) reports a case in which a contraction of the plantar aponeurosis occurred in conjunction with the appearance of contractions of the palmar fascia of the hands. The lesion is of the same nature—a thick casing, with contraction and pain on standing. It is characterized by difficulty in walking, with pain along the inner margin of the foot, and especially at the posterior insertion of the plantar fascia. There is a tendency to relieve the pain by turning the foot outward and walking on the outer margin. This tendency and the difficulty in walking, on account of the pain, with, in marked cases, transverse wrinkles due to the contraction, are the characteristics of the disease.

This pain, however, even with its localization, cannot be considered as absolutely characteristic, as it is met with when the fascia is over-stretched, as in very obese persons, or in neurasthenics, when the muscular tone is diminished. In the latter form they are more liable to be intermittent in character. This is undoubtedly a progressive affection, and is undoubtedly of neuropathic origin. In this particular case it developed in a person having a marked neuropathic tendency, and in whom contractions of the palmar fascia were also present.—*Am. Jour. of Med. Sciences.*

A SUCCESSFUL REMOVAL OF THE INNOMINATE BONE AND
LOWER EXTREMITY.

Ssaltschew (*Centralblatt für Chirurgie*, Sept. 2; *Edinburgh Medical Journal*, December) describes a successful case of this operation, which he calls "exarticulatio interilio-abdominalis." It may be carried out in two ways. Jaboulay's method consists in dividing the symphysis pubis and tying the common iliac vessels; in all of the four cases in which it has been practiced the patient succumbed. The method of Girard and Bardenheuer consists in tying the external and internal iliac arteries, and in leaving the bone internal to the thyroid foramen.

The author adopted Jaboulay's method, with certain modifications; the patient, a male, aged 38 years, had suffered for two years from sarcoma of the right half of the pelvis, extending upward to the umbilicus and downward into the thigh; he suffered from very severe pain; the branches of the common iliac artery and the lower half of the psoas muscle were involved by the tumor.

The operation was performed on Dec. 8, 1898. The first incision was made from the free extremity of the last rib to the anterior superior iliac spine, and then along Poupart's ligament to the spine of the pubes; the soft parts were divided down to the peritoneum; the common iliac artery was ligated three centimetres below its origin from the aorta, an oval posterior flap was then formed by an incision starting from the spine of the pubes along the fold between the perineum and thigh to the tuber ischii, then curving round behind the great trochanter to the middle of the crest of the ilium, where it joined the first incision. After separating the soft parts, the symphysis pubis was divided, as were also the psoas muscle, the anterior crural nerve, the obturator vessels and nerve, and the sacral plexus. The sacro-iliac ligaments were then divided and the extremity removed. The bleeding was moderate. The divided muscles were sutured, those of the abdominal wall with the sacro-lumbalis, psoas magnus, and gluteus maximus. The skin wound was closed with sutures, but had to be partly opened on account of suppuration. Healing

was completed in three months with the assistance of skin grafts.

Apart from some temporary disability of the bladder, the function of the pelvic organs was not disturbed. The tumor was a periosteal sarcoma, originating in the innominate bone, which had made its way through the thyroid foramen and become fused with the periosteum of the femur. When hardened it weighs over six kilogrammes.—*N. Y. Med. Jour.*

ICHTHYOL IN JOINT AFFECTIONS.

Stimulated by the good effects following the use of ichthyol in chronic rheumatism, G. Edlefsen (*Therap. Monatshft.*, January, 1900) was led to try a more recent preparation, ichthyolvasogen, in this and allied conditions. The great powers of penetration possessed by this compound have proven it of especial value in the chronic mono-articular arthritis following the acute lesion and even in the polyarthritic form, and in arthritis deformans it did not disappoint. Eight to ten drops should be used for the larger joints and two for the smaller ones; when well rubbed in, the good effects of massage will be added to the curative action of the drug. In conditions where much tenderness exists, however, massage is contra-indicated, and the usual solution of ichthyol in alcohol and ether is to be preferred.—*Medical News.*

SUTURE OF BLADDER.

Golichewski (*Archiv. fur klin. Chir.*, vol. 60, p. 643) says that an incision in the bladder should be sutured immediately, provided no chronic cystitis is present, nor hypertrophy, and the patient is not a hemophiliac, and the kidneys are not seriously affected. A marked hypertrophy of the bladder wall makes it necessary to apply ligatures to its vessels. These can find their way into the viscus if the wound is closed and give way to the formation of stones. He has practised immediate suture in thirty-five cases. One patient, a marasmic child of three years, died in eighteen hours of anuria. There was a left-sided hydronephrosis and double chronic interstitial nephritis. Another patient who had double hydronephrosis, chronic interstitial nephritis and chronic cystitis, died in four

days. In five cases there was a leakage of urine. In two of these the wound in the bladder was opened and allowed to closed itself. In the other three a catheter was passed and left in the bladder for some days. The fistulæ closed in from two to ten days. In one case hemorrhage compelled the re-opening of the bladder. The remaining twenty-seven patients recovered without accident. These results are a sufficient recommendation of this method of treatment.—*Medical News.*

SHOCK IN MODERN SURGERY.

Shrady (*Medical Record*, July 22, 1889) points out very clearly the great danger that threatens modern surgery. The perfection to which aseptic technique has been developed makes it possible for almost any practitioner to perform major operation. The patient is under the anesthetic and feels nothing; asepsis secures primary reunion, so that the operator can take all the time he desires, and if the patient dies it is attributed to shock; for the wound is aseptic and there has been no great loss of blood.

The author points to the difference between modern and the former age of surgery, where brilliant operators, with perfect technique and lightning rapidity, operated without anesthesia or antiseptics, and secured wonderful results. They could not depend upon anesthesia and asepsis to cover the defects of technique, but by the rapidity of their operations saved so much of the shock to the patient that his vitality could do more for him.

Shrady says: "We must not forget that prolonged administration of anesthetics is, independently of the operation, a means of shock in itself. While ether may tend at first to modify shock, its prolonged use adds to the depression of the patient. The same may be said for chloroform. The bodily temperature is lowered if the administration of ether continues longer than an hour or an hour and a half. Often, especially in chloroform cases, the normal temperature is not restored until the lapse of twenty-four hours. This delayed reaction is itself an evidence of serious mischief done to the nervous centres. These changes are often sudden and correspondingly dangerous. Although more frequently seen with chloroform,

they occur often enough with the safer anesthetic—ether—to place us on our guard.

“It is not inconsistent with carefulness that we should do our work more quickly. We should shorten not only the period of anesthesia, but that of the operation itself. To do whatever is absolutely necessary, and do that as quickly as possible, is the primary consideration. Of the two methods of procedure the one that takes the shortest time should always be preferred. In grave and prolonged operation it is much safer to divide the work into two periods, if possible, rather than strain a point to finish it in one.”

There is a certain larger amount of shock in all operations in highly nervous areas, as is evidenced by the extra amount of anesthetic required. In the pre-anesthetic days the effect of the division of a nerve or bone was seen immediately in the pulse. There can be no doubt that there is still much of this shock felt by the system despite the anesthesia. “Quick reaction follows quick operation. The two hold a proper relation to each other for good. On the contrary, the longer the operation the longer is the reaction delayed. How often do we hear that the patient failed to rally after hours of fruitless stimulation?”—*American Journal of Medical Sciences.*

MEDICAL.

INTERNAL SECRETIONS AND THE REGULATION OF THE CIRCULATION.

Kahane (*Centralblatt für allg. Path. u. path. Anatomie*, Band x, No. 23) has an interesting article on this subject. He begins with a number of axioms, such as: All glands which are independent organs have an internal secretion; the principal function of this secretion is the regulation of the distribution of blood; there are relationships between the various blood-glandular organs and between the latter and certain vascular areas, growth and development, nutrition and metabolism, depend on a proper distribution of blood; diseases of the

blood-glandular organs lead to disturbances of growth, development, metabolism and nutrition, varying according to the stage of development of the different organs. The discussion of the probable internal secretions of various glands does not bring out anything especially new. The author insists that the functional affections of the internal secretions are more important to bear in mind than anatomical diseases of the various organs. So, for example, tuberculosis of the adrenals is important in the pathogenesis of Addison's disease only in so far as it affects the internal secretion of the glands. It is only according to this view that we can understand how in one case, notwithstanding anatomical disease, there is no Addison's disease; in another case, although there is Addison's disease, there is still no anatomical change in the adrenals. Similar statements could be made of the hypophysis and acromegaly. The well-known pathological relation between the parotid glands and the testes the author claims to indicate a relation in internal secretions. He also thinks that similar relations exist between the liver and the kidneys and the kidneys and the heart. In regard to the regulation of the circulation, Kahne points out that a number of glandular extracts exert an intense effect on the blood-pressure and the contraction of the blood vessels. This is most obvious of the adrenal extract, which, when applied subcutaneously or in intravenous injections, causes a temporary but enormous increase of the blood-pressure, or applied on mucus membranes causes an almost complete local anemia. Thyroid extract, on the other hand, causes a fall of blood pressure without change of the heart's action, so that one must suppose that a dilatation of the arteries occurs. Hypophysis extract increases the blood-pressure, with simultaneous increase of the heart's action, so that a contraction of the arterioles is probable.

Regarding the other extracts, there are statements going to show that they all cause alterations of the blood-pressure. Studies of the diseases of the ductless glands point to the same fact. According to the author's theory, all the vascular alterations commonly attributed to the influence of vasomotor nerves are due to the internal secretions of the various glands. He admits that the fibres of the

sympathetic and vagus are in fact concerned in the distribution of the blood, but insists that the irritation for these nerves is furnished by the internal secretions. This makes it clear to him why the blood-vascular organs are so richly innervated. The regulation of the blood supply to the different parts of the body, according to him, is due to the interaction of the blood-vascular organs, and he makes an attempt at a scheme showing the relation of the various internal secretions to certain circulatory areas—thus the thyroid and the brain, skin and bones, the adrenals and the muscles, the pancreas and the portal circulation, the thymus and the aorta, the kidneys and the aorta, etc. The terms "hemotrophy" and "dyshemotrophy" are introduced in order to indicate whether the distribution of blood corpuscles corresponds to the needs of the single organs and the whole organism, or otherwise, and, as the author says, when the principle of hemotrophy is understood such crude ideas as the antithesis between anemia and hyperemia must be abandoned. The further details of the author's sketch are not necessary to reproduce here. The extracts given should suffice to call attention to the article and show its interest in the study of many problems in pathology.—*American Journal of Medical Sciences.*

PHTHISIS TREATED BY EPIDERMIC APPLICATION OF GUAIACOL.

Dr. A. F. Shoyer, from a study of the literature, concludes:

1. Many encouraging results are reported.
2. The drug is absorbed by the skin.
3. Antipyresis is undoubted.
4. There may be profuse night-sweats, exhaustion and collapse.
5. The temperature tends to rise to a higher level.

In his own experience a rapid fall of temperature follows application of the drug. To avoid the sudden decrease of temperature and accompanying prostration, guaiacol was applied when the temperature was at its minimum. The drug may be painted on the skin, or applied on wool beneath a watch glass, or as a compress. Six minims of guaiacol thrice daily, increased to thirty minims, was the usual amount prescribed. Absence of effect resulted in many instances. It is suggested that ether previously applied might aid absorption. Of fourteen patients thus treated the average gain in weight was 2.32 pounds. Of twelve unselected patients

the average weekly gain was 1.25 pounds. Of twenty-five patients ten improved, twelve were unaffected, three grew worse. Five of the ten who improved were febrile and more or less free from secondary infection; three were subfebrile and probably infected by germs of suppuration, and two were indefinite. The conclusion reached is that the patients most favorable for treatment are those with pyrexia and free from secondary infection. Patients with subfebrile temperature do fairly well. If there is apyrexia, no effect follows treatment, while if both pyrexia and marked secondary infection are present bad results follow. Most of the patients discharged improved, subsequently returned worse, so that no permanent effect was obtained. — *The Scottish Medical and Surgical Journal*, 1899, vol. v, p. 204.

DIET IN TYPHOID FEVERS.

Much has been written, both *pro* and *con*, in reference to this or that article of diet in the management of typhoid fever. It is a settled fact that the food must be fluid, highly nutritious, and easy of digestion, for the maintenance of nutrition is imperative in this wasting disease. Milk is probably the most extensively used, and will form the main article of diet so long as fever lasts. I have used milk in nearly all its various forms in the care of my cases—from frozen or boiled sweet milk to buttermilk; from sweet milk, milk with lime-water, to that partially digested with pepsin or pancreatin when digestion was enfeebled.

The tendency in milk diet is to overfeed by forcing too large quantities at one feeding, and thereby cause a disgust for that diet upon which we have pinned our faith. If one insists upon an absolute milk diet, not infrequently will you find your patient has gone without it rather than take it. They fret under its administration, digestion is interfered with, curds swarming with bacteria of decomposition are found in the increased diarrheal discharges, plus the bacteria of typhoid fever already existing; hence the object which we wish to attain so far as it is possible (that of rendering the gastro intestinal tract aseptic) is defeated from the outset by error in diet. I have often been puzzled as to what to substitute for milk in this class of cases until the stomach became

more tolerant. I have tried various farinaceous substances, and discarded them on account of the increase of flatulency they almost invariably produced.

For some time past I have tided my patients over their critical period by tablespoonful doses of liquid peptonoids every two hours, giving nothing else in the way of nourishment but the above remedy. I cannot speak too highly of this elegant preparation where digestion is below par, as a highly nutritious food, that will not curdle upon the stomach or leave a residue in the intestinal tract. It is a slightly stimulating food, consequently your cases, as a rule, will require less alcoholic stimulants—a great desideratum in some cases. I do frequently carry through my cases of typhoid successfully, where no other article of diet is given from the time I make the diagnosis until convalescence is firmly established, and I call the attention of the profession to it for that class of cases in which milk cannot be taken.—*Fred C. Shurtleff, M.D., Los Angeles, Cal., in Southern California Practitioner.*

OBSTETRICAL.

PARTURITION AMONG THE ESKIMOS.

Dr. C. C. Gleaves records in the *Pacific Medical Journal* for December his unusual good fortune in being permitted to be present during the confinement of an Eskimo woman. He says:

“It is the custom among the Eskimos not to be confined in any ‘igloo,’ or house. The woman must go into the woods or brush alone—no one, not even the husband, being allowed to be present—and remain there with no food except a piece of dried beef for ‘five sleeps,’ when she is permitted to return to the ‘igloo;’ no doubt that being the time required for the lochial discharge to cease. Whereupon she and her husband take a bath and change their undergarments, when they are fortunate enough to have a change. They are then supposed to be clean until the next confinement. At the time of the

monthly periods of menstruation a woman is not allowed to enter a boat or ride upon a sled of her husband.

"In January, 1889, during the long winter nights after 'old Sol' had bid adieu to the people of northern Alaska to seek a more congenial climate in the sunny South, and in the midst of an Arctic blizzard a messenger—a little Eskimo boy—came to my 'igloo' and announced that 'Mama speak catchem mickaninny by and by,' 'speak' being a team in universal use. I arose from my bed, dressed myself in fur clothing, and started for the scene, a short distance away, the thermometer ranging from 30° to 40° F. below zero, where I found the woman out in the brush in a snow-pit, oval in shape, about two feet deep and six feet across, with a few spruce boughs thrown around the margin as a wind-break, together with a smoky fire of twigs. The parturient chamber (?) had been prepared by the woman herself by scattering a thin layer of dried grass, prepared by her for this occasion, upon which was spread a reindeer skin, with no covering of any kind.

"On my arrival at the parturient field I found the woman in labor, on her knees, with buttocks resting on her heels, and having severe bearing-down pains, which came faster and faster and more severe until almost continuous, when the bag of waters ruptured. The mother of the woman and my interpreter, the little boy, who were near by, began to exclaim, 'Mama muckey, mama muckey'—'muckey' meaning to die. I asked the boy what was the matter with mama; he said in reply, 'Mama look see pechuck'—'pechuck' meaning no, or negative—or, in other words, she could not see; her blindness, no doubt, being due to syncope. I assured them that mama would soon be all right, and not to be frightened. She soon rallied and labor progressed naturally through the second stage, and after the interval of a half to three-quarters of an hour the pains returned. She again had syncope, no doubt due to hemorrhage. She soon rallied again and expelled the placenta, whereupon she took a piece of sinew, which had been previously prepared from the hock of a caribou, and ligated the cord as close to the umbilicus as possible, then severed the cord close to the ligature with a piece of serrated flint,

She washed the babe in snow, although it rebelled by kicking and squalling lustily at such a cold reception. Notwithstanding the rigorous conditions surrounding the Eskimo mother in childbirth, the rate of mortality of the babes born will agree favorably with our own death-rate, and the same may also be said of the mother. Nature moves in a mysterious manner to perform her miracles and reproduce herself.

"The woman wore a belt or a piece of thong to confine her 'parka' around the waist, and to it was fastened by short deerskin thongs bits of ivory, buttons, leather bags in which she kept tobacco, matches, and other small articles of value. After the snow bath she placed her babe underneath the folds of her 'parka,' which is the usual resting place of the young Eskimo (although sometimes astride the mother's neck), and proceeded in a bent-over position with staff in hand for support, stepping slowly and laboriously, leaving a trail of blood, to another snow-pit about fifty feet away which had been prepared. She would not remain any length of time at the place where the babe was born, for it is considered unclean.

"Our own women think they have an awful time during confinement, and some do; but what a contrast between them and their Eskimo sisters! Just imagine for a moment one of our women confining herself alone and under such conditions!"—*N. Y. Medical Journal*.

THE MODIFICATION OF COW'S MILK FOR ARTIFICIALLY-FED BABIES.

The modification of cow's milk for artificially-fed babies is of greater importance than is generally conceded. It is comparatively simple when one knows the constituents of mother's milk and cow's milk. The following tables of modification may be of use to the general practitioner. For convenience 24 ounces is the amount prepared in each instance:

No. 1. For infants to two months: Milk, $\frac{3}{4}$ viii; cream, $\frac{3}{4}$ iss; sugar, $\frac{3}{4}$ i $\frac{1}{2}$; gruel, $\frac{3}{4}$ xivss.

No. 2. For infants two to five months: Milk, $\frac{3}{4}$ viii; cream, $\frac{3}{4}$ iii; sugar, $\frac{3}{4}$ i $\frac{1}{2}$; gruel, $\frac{3}{4}$ xiii.

No. 3. For infants six months to one year: Milk, $\frac{3}{4}$ viii; cream, $\frac{3}{4}$ ivss; sugar, $\frac{3}{4}$ i $\frac{1}{4}$; gruel, $\frac{3}{4}$ xiss.

These tables are after Holt's modification, and are based on the supposition that the milk used contains 3 per cent. fat and the cream 16 per cent,

Milk fat can be easily determined if it be remembered that the relation of cream to fat is as 5 to 3.—*Chicago Clinic.*

INDICATIONS FOR CÆSAREAN SECTION.

Eduard Franck says that Cæsarean section is undoubtedly the easiest coeliotomy, and he adds that it is the duty of every obstetrician to be able to define his position in the case of perforation of a living child.—*Medical Record.*

TWIN PREGNANCY WITH CENTRAL PLACENTA PRÆVIA.

Collingwood Fenwick reports a case of this condition occurring in a twin pregnancy. There were two placentæ, one lying across the outlet and the other attached to the lower segment of the uterus.—*Medical Record.*

Editorials, Reviews, Etc.

PUBLISHER'S NOTICE.—The JOURNAL is published in monthly numbers of *forty-eight pages*, at one dollar a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money-order, draft, or registered letter, should be addressed to the Business Manager, SAMUEL S. BRIGGS, M.D., Corner Sumner and Union Streets, Nashville, Tenn.

All communications for the JOURNAL, Books for review, exchanges, etc., should be addressed to the EDITOR.

MEDICAL SOCIETY, STATE OF TENNESSEE.

The next meeting of the State Medical Society will be held at Knoxville, April 10, 11 and 12. A pleasant meeting is assured and we trust it will be well attended.

The usefulness of this Society should be very great to the profession of the State—even greater than to the individual. As a rule the personal professional advancement is sought too eagerly at these meetings, overlooking the good to be derived from concerted work looking to the betterment of the status of the profession of the State.

This Society can render itself a power for great good by lending itself to the consideration of medical legislation, of which the State (though it has enough, such as it is) is greatly in need. At present we are over-run by charlatans, both in and outside of the profession, and strenuous efforts are being made to render ineffective the nucleus of legal protection we have gained. Every effort should be directed to the complete

organization of the profession for the purpose of obtaining laws for our full protection. This protection is to be attained only through a higher standard of requirements.

The Society is in a very flourishing condition and the prospects for a most satisfactory meeting under the well-known Dr. Nelson of Chattanooga are splendid.

MEDICAL LEGISLATION.

It gives us pleasure to see that in a Southern State efforts are being made to secure reciprocity in medical legislation.

Bills amending the medical practice law have been introduced in the Virginia Legislature, seeking to have offenses of illegal practise tried in county and corporate courts, and providing that applicants for a license to practice shall produce a certificate from the State Examining Board or an affidavit to the effect that he began the practise of medicine prior to Jan. 1, 1885, and that the Examining Board may issue certificates at its discretion to graduates from other States without examination—a step toward reciprocity, toward a uniform standard of requirements.

UNITED CONFEDERATE VETERANS.

Dr. Preston B. Scott, Chairman of the Medical Committee, writes that "the Medical Committee desires to make a feature at the Louisville Reunion, May 30, 31, June 1, 2, 3, of the assembling and entertainment of physicians who were Surgeons of the Army and Navy of the Confederate States, as well as those who are veterans and sons of veterans," and asks that those of our readers who were Surgeons in the Army or Navy of the Confederate States will send their names, so that that the committee may communicate directly with them.

THE TELEPHONE AS A TEASER.—The *Cleveland Medical Gazette* for January sets forth the objectionable aspect of telephone service from the doctor's point of view. Patients question him over the wire, and yet there has been no visit or office interview, so that generally he has not the assurance to make a charge. Our contemporary thinks that when a telephone conversation does away with the need of a visit, a charge should be made for it. "Otherwise," it says, "the doctor's time and his gray matter are drawn upon without compensation, and he is further drained by having to pay for the very apparatus that is used to extract them from him." The remark seems to us quite justified.—*N. Y. Med. Jour.*

[Why not charge?—ED.]

NATIONAL PURE FOOD AND DRUG CONGRESS.

In compliance with requirement of the Constitution of the National Pure Food and Drug Congress, the undersigned officers and Executive Committee hereby call a meeting of said Congress to be held in the city of Washington, beginning March 7, 1900, at 12 o'clock.

Your committee in issuing this call would direct especial attention to the fact that the National Pure Food and Drug Congress, through its authorized committees and officers have, since the last meeting of the Congress, used every effort to secure the passage of the "Natural Pure Food Bill," endorsed by the Congress and introduced in the House of Representatives by Hon. Marriott Brosius, of Pennsylvania.

The same bill has also been introduced in the Senate by both Senator Hansborough and Senator Allen. It is believed that with a united effort all along the line that the Bill can be passed and a National Pure Food Law be enacted during the present session of Congress. It is therefore greatly to be desired that any interest entitled to representation in the Congress should be represented at the third annual session.

The bill of Mr. Brosius, of Pennsylvania, is known as House bill No. 2561, and those of Senators Hansborough and Allen respectively, Senate bills No. 2222 and 2050. Senator Mason, of Illinois, acting for the committee on Manufactures of the Senate has made an investigation into the question of adulteration, and will doubtless present to the Senate sufficient evidence to induce the passage of the bill through the Senate. All who intend being present at the Congress should notify the Corresponding Secretary as early as possible so as to enable him to secure reduced transportation rates.

The headquarters of the Congress will be at the National Hotel, where a reduced rate of \$2.00 a day has been secured for delegates and their friends.

Your committee cannot too strongly urge the attendance of every one who is entitled to be present, as the more united the effort made and the stronger the pressure brought to bear upon Congress the sooner the passage of this important matter will be secured.

The following apportionment of delegates is made so as to embrace, as far as possible, every interest involved in the production, manufacture, and sale of food, drug, and liquor products—in proportion to the numbers engaged therein. It embraces the Scientific Organizations and Health Departments, as well as those who have charge of local laws in the various States and Territories.

APPORTIONMENT OF DELEGATES.

The Governors of each State and Territory are requested to appoint ten (10) delegates, distributed as follows: Agriculturists, 4; Pharmacists, 2; Wholesale Grocers, 1; Retail Grocers; Food Manufacturers, 1; Proprietary Manufacturers, 1; 10.

Agricultural Department—the Secretary of Agriculture and five (5) delegates to be appointed by him.

The Internal Revenue Department—the Commissioner and five (5) delegates to be appointed by him.

The Surgeon-General of the Army and five (5) delegates to be appointed by him.

The Surgeon-General of the Navy and (5) delegates to be appointed by him.

The Surgeon-General of the Marine Hospital Service and (5) delegates appointed by him.

BOARDS OF HEALTH.

State Boards of Health, 3; Boards of Health of cities from 20,000 to 100,000, 1; Boards of Health of cities from 100,000 to 500,000, 2; cities of 500,000 and upwards, 3.

AGRICULTURAL ASSOCIATIONS.

The National Grange, P. of H., 5; each State Grange, 2; The National Farmer's Alliance, 5; each State Alliance, 2; The National Farmer's Congress, 5; National Horticultural Society, 3; State Horticultural Societies, 1; National Dairy Association, 5; State Dairy Association, 1; National Bee Keeper's Association, 3; State Bee Keeper's Association, 1.

OFFICIAL ORGANIZATIONS, ETC.

Each State Agricultural Department, 2; each State Food and Dairy Commission, 2; each Experiment Station, 2; each Official Agricultural Chemist, 1; each Agricultural College, 1; National Pure Food Association, 5; each State Pure Food Association, 2; each State Board of Pharmacy, 1; State Board of Agriculture, 1.

SCIENTIFIC AND MEDICAL.

American Chemical Society, 5; State Chemical Societies, 2; local Medical Societies in cities from 10,000 to 100,000, 1; 100,000 to 500,000, 2; 500,000 and upwards, 3; American Pharmaceutical Association, 5; State Pharmaceutical Associations, 2; Separate Organizations in cities, 1.

TRADE ORGANIZATIONS.

Baker's National Association, 3; Baker's State Associations, 1; Bee Keeper's Union, 3; Cider and Vinegar National Association, 3; Cider Vinegar State Associations, 1; Confectioner's Association (National), 9; Confectioners' Association (State), 1; Dairy National Union Association, 5; Dairy Union State Associations, 1; Druggists' Wholesale National Association, 5; Druggists' Wholesale State Associations, 1; Grocers' National Wholesale Association, 5; Grocers' Wholesale State Associations, 1; Cheese Manufacturers, National

Association, 3; Cheese Manufacturers, State Association, 1; Grocers' National Retailers, 5; Grocers' State Retailers, 3; Fishing Interests, 5; National Preservers, 5.

TRADE ORGANIZATIONS—LIQUOR TRADE.

United States Brewers' Association, 5; Brewers' State Associations, 1; Liquor National Association, 3. Liquor State Association, 1; Vintners' National Association, 3; Vintners' State Association, 1; Millers' National Association, 5; Millers' State Association, 1; Proprietary Association (National) 5; Womens' C. T. U., National, 5; State, 2.

Arrangements have been made for reduced railroad transportation and hotel rates, the latter being fixed at \$2.00 a day at the National Hotel.

By order of the Executive Committee.

WM. FRIAR, Pa., Chairman.

Headquarters, National Hotel, Washington, D. C.

THE NEW ORLEANS POLYCLINIC THIRTEENTH ANNUAL SESSION opens November 20, 1899; closes May 10, 1900. Every inducement in clinical facilities for those attending. The specialties are fully taught. Further information, New Orleans Polyclinic, New Orleans, La.

BOOK NOTICES.

HISTOLOGY AND PATHOLOGY: A Manual for Students and Practitioners. By JOHN BENJAMIN NICHOLS, M.D., Demonstrator of Histology, Medical Department Columbia University, Washington, D.C.; and FRANK PALMER VALE, M.D., Assistant in Pathology, Medical Department University of Georgetown, Washington, D.C. Series edited by BERN B. GALLAUDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon, Bellevue Hospital, New York. Illustrated with 213 Engravings. LEA BROTHERS & Co., Philadelphia and New York, 1900.

This is an excellent number of the admirable series of pocket text-books now being issued by Lea Brothers. It is a concise and systematic arrangement of all the essential facts relating to the subject treated of, for the use of students. The work is copiously illustrated. It deserves to become popular.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATIONS IN PRACTICAL MEDICINE. By J. MITCHELL BRUCE, M.A., M.D., F.R.C.P., Physician and Lecturer on the Principles and Practice of Medicine, Charing Cross Hospital; Consulting Physician to the Hospital for Consumption, Brompton; Examiner in Medical University of Cambridge. Adapted to the United States Pharmacopeia by E. QUINN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica in Jefferson Medical College, Philadelphia. LEA BROTHERS & Co., Philadelphia and New York, 1900.

This work is somewhat unique in character, and is so eminently practical in its make-up and so essentially useful in its teachings that it is sure to be exceedingly useful. It is made on the lines the author has adopted in his teaching—that is, to direct the attention of the student first and chiefly to the objects of treatment which their knowledge of disease indicate to them, and then discuss the selection of medicines and

other means of treatment calculated to effect the desired ends. We are greatly pleased with the design of this work, and do not hesitate to commend it.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. For the Use of Students and Practitioners. By JAMES NEVIN HYDE, A.M., M.D., Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Presbyterian, Augustana and Michael Reese Hospitals of Chicago; and Consulting Dermatologist to the Chicago Hospital for Women and Children; and FRANK HUGH MONTGOMERY, M.D., Assistant Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School; Attending Physician for Skin and Venereal Diseases, St. Elizabeth Hospital, Chicago. Fifth and Revised Edition, illustrated with 111 Engravings and 24 Plates in Colors and Monochrome. LEA BROTHERS & Co., Philadelphia and New York, 1900.

The popularity of this work is attested by its early appearance in its fifth edition. The book has been thoroughly revised and considerably enlarged. It is only necessary to announce its appearance to ensure its continued popularity.

THE INTERNATIONAL TEXT-BOOK OF SURGERY, by American and British Authors. Edited by J. COLLINS WARREN, M.D., LL.D., Professor of Surgery in Harvard Medical School; Surgeon to the Massachusetts General Hospital; and A. PEARCE GOULD, M.S., F.R.C.S., Surgeon to Middlesex Hospital; Lecturer on Practical Surgery and Teacher of Operative Surgery, Middlesex Hospital Medical School; Member of the Court of Examiners of the Royal College of Surgeons, England. Volume I—General and Operative Surgery. With 458 Illustrations in the Text, and 9 full-page Plates in Colors. W. B. SAUNDERS, 925 Walnut street, Philadelphia, 1900.

The publishers have conferred a favor on the medical profession by presenting this excellent work. In securing as editors of the volume the services of two such well-known authors as Dr. Warren in America and Dr. A. Pearce Gould of England, the publishers have established a certainty of success. The contributors to the two volumes are all well-known writers upon the subjects which each one handles. The work is arranged in two volumes, of which Vol. I is devoted chiefly to General Surgery, and Vol. II to the various branches of Special Surgery. It is one of the most valuable recent contri-

butions to surgical literature, and is sure to receive a warm welcome from the profession. The object of the work is shown in the following extract from the preface:

"The aim has been to produce a reliable text-book of surgery, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology and diagnosis, and such a detailed account of treatment as to form a reliable guide to modern practice. While not aiming at the merely novel, they have carefully omitted antiquated methods, and they hope that the reader will find in these pages only what is practically useful to day."

Publishers' Department.

MAKE A NOTE OF THIS.—It is a matter of common observation that many cases of bronchitis will persist in spite of the continued, varied and judicious use of expectorants. "The cough," says one prominent physician, "hangs on, harasses the patient with its frequency and severity, and is exceedingly liable to recur every winter—to become a regular 'winter cough'—with its sequelæ of emphysema, asthma and ultimately dilatation of the right heart."

Dr. Milner Fothergill of London insisted that cough of this character is due to lack of tone, not only in the general system but in the blood vessels of the bronchioles. This authority demonstrated that the only successful method of treating this form of cough is by means of appropriate systemic and vascular tonic medication. It is particularly in this class of cases that Gray's Glycerine Tonic Comp. has gained a most enviable reputation: This remedy, which is a most palatable and agreeable one, not only has a selective tonic and antiphlogistic action upon the respiratory mucous membrane, but it removes the ever-present element of systemic depression. The beneficial effects of Gray's Glycerine Tonic Comp., even in rebellious cases, are invariable and most pronounced.

INFLUENZA'S INSIDIOUS ATTACKS REPELLED.—The coal-tar products were found to have great power as analgesics and antipyretics long before experiments in the therapeutical laboratory had been conducted to show their exact action. As a result of this laboratory work we know now that some prod-

ucts of the coal-tar series are safe, while others are very dangerous. Antikamnia has stood the test, both in the laboratory and in actual practice, and is now generally accepted as the safest and surest of coal-tar products. Five-grain "Antikamnia and Codeine Tablets," each containing $4\frac{3}{4}$ grains Antikamnia, $\frac{1}{4}$ grain sulph. Codeine, afford a very desirable mode of exhibiting these two valuable drugs. The proportions are those most frequently indicated in the various neuroses of the throat, as well as the coughs incident to lung affections.

That Codeine had an especial effect in cases of nervous coughs, and that it was capable of controlling excessive coughing in various lung and throat affections, was noted before its true physiological action was understood. Later it was clear that its power as a nervous calmative was due, as Bartholow says, to its special action on the pneumogastric nerve. Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tract.—*Chicago Medical Times*.

AN INTERESTING EXPERIMENT.—At the meeting of the Western Surgical and Gynecological Society, the last week of December, an exceedingly interesting incident occurred. In 1870 Messrs. William R. Warner & Co. filled an order for pills for Messrs. Chilcote & Cook of Washington, Iowa. One of the bottles being still on hand, it was forwarded to Dr. Wilton McCarthy of Des Moines, Iowa, to test the solubility of the pills before the above-mentioned Society. The following correspondence explains the result fully:

"WASHINGTON, Iowa, Dec. 23, 1899.

"W. W. McCarthy, M D., Des Moines, Iowa:

"DEAR SIR:—Having some pills manufactured by us by Wm. R. Warner & Co. in the latter part of 1870 (at the request of Dr. W. E. Fraser, then a practising physician in this place), which are still in good condition, and thinking it might be of interest to the physicians who meet in Des Moines during the coming week to see a pill made twenty-nine years ago in as good condition as these are, we forward them for your and their inspection.

"A manufacturer who places on the market goods which stand the test these have, is worthy of commendation.

"Yours truly, CHILCOTE & COOK."

"STATE OF IOWA,
"WASHINGTON COUNTY. } S.S.

"Subscribed and sworn to before me this 23d day
"of December, 1899.

"L. E. LATTA, Notary Public."

"DES MOINES, Iowa, Jan. 1, 1900.

"Wm. R. Warner & Co.:

"I am pleased to inform you that the pills which were made by your firm in 1870 and sent to me by Chilcote & Cook of Washington, Iowa, were tested as to their solubility at the meeting of the Western Surgical and Gynecological Society, held in our city last week. They were readily soluble in water at a temperature of 100°, and were completely disintegrated at the expiration of 14¼ minutes.

"Respectfully, WILTON MCCARTHY, M.D."

Messrs. Warner & Co. have had on exhibition, since 1873, a mahogany case filled with sugar-coated pills. After a quarter of a century they do not show the effects of age, but are as good as when first made— which means they are perfect pills.

NORWITHSTANDING the large number of hypophosites on the market, it is quite difficult to obtain a uniform and reliable syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including iron, quinine, strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

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C. S. BRIGGS, A. M., M. D., EDITOR.

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Original Communications.

MERCURIAL PTYALISM.*

BY J. S. CAIN, M.D.,
Professor of Medical Practice and Pathology in the Medical Department
of the University of the South, Sewanee, Tenn.

I select this somewhat ancient and familiar subject for a short essay, because it is a subject with which we are all more or less familiar, and about which we have theories and opinions which we consider conclusive, consequently, a subject which we will all feel competent and inclined to discuss; and yet, if I am not greatly mistaken, such free discussion will fail to reveal that unity of opinion which might be expected upon so common-place a subject.

Ptyalism in a general way, is synonymous with sialorrhœa or excessive flow of saliva; hypersecretion of the salivary

*Read before the Upper Cumberland Medical Society, May 2, 1899.

glands has a variety of causes, *sapid viands* and even the thought of certain savory foods will increase salivary secretion; irritation or inflammation in the buccal cavity will produce the same effect, certain therapeutic agents, both vegetable and mineral, are known to be *sialagogues*; *sialorrhœa* accompanied with stomatitis greatly resembling mercurial ptyalism is now and then encountered as an intercurrent complication in several protracted diseases; a few mineral agents other than mercury, may produce ptyalism accompanied with stomatitis.

The most common form of ptyalism, however, and the one of most importance to the physician is that produced by the various forms of mercury, this may be produced by taking the drug by the stomach, having it applied to the surface in the form of unguents or in mercurial vapor, also by the inhalation of mercurialized vapor in the arts. This form of the disease or condition is characterized by a profuse discharge of saliva, often several times the physiological quantity, and a sloughing ulcerative condition of the gum tissue in all respects very similar to that form of ulcerative stomatitis sometimes encountered, from other and from numerous causes.

Without discussing ptyalism resulting from other causes, I will confine my remarks strictly to that resulting from mercurial influences. The salivary glands doubtless always participate more or less in the process of eliminating mercurials from the system, this labor is often so trifling as to produce no appreciable change in the salivary function, at other times, when other and more important emunctories, which participate in and perform most of this process, such as the liver and intestinal glands are inactive, the salivary glands have imposed upon them exaggerated and abnormal duties, under which perverted action is induced. This is evident from the fact that mercurial ptyalism seldom, probably never, occurs when the bowels are active and the liver is in function.

The *sialorrhœa* in mercurial stimulation is often so slight as to go unnoticed, indeed it is seldom recognized, except when attended with the complication of stomatitis.

It may be interesting to inquire, why one person will wholly escape the condition and another under the same treat-

ment fall a victim to it, or why, the same person will take mercurials for a great while without the least ptyalism and again become impressed from taking a less amount than on many former occasions. Individual and peculiar susceptibility, the argument which covers up much of our ignorance on other occasions may be argued here as well.

This susceptibility, however, is usually largely, owing to the causes before mentioned, torpidity and inaction of other and correlative organs, by which increased function of the salivary glands is demanded with retained principles in the blood, in consequence of such inaction, which render the salivary product more acrid and irritating than under ordinary circumstances.

That there are other conditions of system besides those above named, which render mercurial products peculiarly irritating and corrosive to the salivary glands, I think quite likely, and that these irritating products under pathological susceptibility produce the irritation and inflammation in the gland tissue as well as the ulcerative form of inflammation in the gum tissue when sufficient susceptibility exists.

These conditions of peculiar susceptibility in tissue and which result in mercurial stomatitis are obscure and usually beyond our powers of recognition, to such extent that the physician who employs mercurials, has the possibility ever before him of producing salivation. Believing that such a possibility always exists which no amount of acumen can detect and no amount of care, certainly prevent, I feel that the true theory upon which mercurials should be employed, is to first determine whether they are required in a given case, if so, use them regardless of the possibility of ptyalism.

In former times, under what I now regard as a mistaken idea of therapy, it was the custom of many physicians to seek to produce ptyalism in certain inflammatory and other diseases, for its supposed curative power over the disease; these parties sought the best and quickest methods of producing the result. In recent years, under changed theories, it is the fashion to employ the agent with a desire to prevent ptyalism and to use it in a way the least liable to produce it. Differences of opinion have existed in both of these practices. It

was and is still believed by some, that small doses of mercury, frequently repeated is the most effective method of administration to produce the result. This is doubtless true where large doses produce a purgative effect and hepatic stimulation; but with torpid bowels and inactive liver from opium stagnation or other cause, large doses (other things being equal) are much more liable to produce salivation than are small ones.

The writer was accustomed in his early professional career to see cases of salivary stomatitis very frequently, when five grains of calomel was thought to be an insignificantly small dose, and twenty to forty grains was frequently given. Now, when the fad is to give from one-tenth to one-fourth of a grain at a dose, to which practice he has somewhat yielded, doubtless often to the detriment of his patient, he has not seen a case of mercurial salivation for many years, and ascribes the fact to the small and often inert doses of the drug given.

That the exaggerated secretion of saliva and the tender and inflamed condition of the salivary glands is dependant upon irritating products accumulating in these glands in their effort to eliminate mercury, under abnormal conditions, is the most plausible theory, and that the intensity of the effect depends very largely upon the chemico-vital condition of the fluids of the economy at the time can scarcely be doubted.

The most rational theory to account for the accompanying stomatitis would seem, that it is a peculiar inflammation, produced in gum and dental tissue while in a state of pathological receptivity by coming in contact with this acrid and toxic product of the salivary glands. It is also an observed fact that edentulous old persons and infants before the appearance of the teeth, where the gums are in a healthy condition, seldom probably never, have mercurial salivation. And I think it equally axiomatic that persons with sound teeth and clean and healthy gums are almost equally exempt.

On the other hand where lesions exist in gum tissue, with broken enamel decaying and exposed dentine, with separation of the gums from the teeth by the accumulation of tartar and the accumulation of toxins in this favorable field for the cultiva-

tion of micro-organisms, and their absorption by the lymphatics of the neighborhood, thereby crippling and rendering inefficient the salivary apparatus, predispose primarily to this specific form of inflammation in the salivary glands and secondarily in gum, dental and other faucial tissues, which often assumes a sloughing gangrenous character, with which all experienced practitioners are familiar.

CONDITIONS WHICH PREDISPOSE TO MERCURIAL PTYALISM.

As before stated, all influences which tend to arrest normal elimination, at the head of which probably stands torpidity of bowels—meaning also inaction of the liver and intestinal glands, kidneys, skin, etc., with the conditions which would necessarily result from retention of waste products.

Mercury and its baleful effects have since time out of memory furnished the most convenient weapons with which irregulars and quacks have attacked the regular profession who have always employed it, and doubtless will, while the human family remains in the flesh, and that flesh remains amenable to the same physiological and pathological laws.

All manner of evil results have been ascribed to mercury, and the prejudice has been drilled into the minds of the non-professional, and I am sorry to say, some professional as well. Every case of dental decay, instead of being ascribed to the proper cause is charged up to some doctor's calomel. Every sloughing and gangrenous condition about the mouth is laid to the same agent. Most of the old chronic conditions, which have gone the rounds of the profession and finally fallen into quack hands, find a ready and easy etiology in previous abuse of this ever serviceable hobby of ignorance and quackery, and the promise is ever forthcoming that the mercury can be extracted for a stipulated sum, one-half down and the remainder when the cure is effected.

As a shading to these fearful pictures, some of which, as before said, are well founded, many theories have been advanced to account for the ptyalism which now and then occurs. The patient blames the doctor, and the doctor often, in self justification, ascribes it to something which the patient cannot deny having done.

The drinking of cold water, in my early professional life, was believed by the laity and by many doctors, to produce salivation if drank while taking calomel. A very few will interrogate you at present as to this liability. Next came the acid fad, which largely exists with the people of to-day, and occasionally with a doctor also. Twenty years ago it was very generally conceded and charged to the people by their physicians, that the eating and drinking of sour things, like fruits and lemonade, while taking mercury would produce ptyalism, and I fear that a physician occasionally, even now relieves his conscience by telling his patient that it was that apple, pickle or lemonade which did it, instead of saying that it was unavoidable.

In point of fact, if fruits and vegetables have any effect, it is in the line of preventing salivation; they are all more or less laxative, and open bowels is one of the greatest safeguards against this result. Another popular idea which I touch more hesitatingly, not because I consider it any the less radical, but because I am convinced that many well-informed physicians are more or less influenced by it in making their prescriptions—I allude to the opinion that the administration of mineral acids while taking mercurials is liable to produce ptyalism. Is this true, or is it one of those popular fads, fostered by interested parties, and of the same order of the cold water and sour fruit delusion? I incline so to look upon it.

As to other acids except hydrochloric, there certainly can be no suspicion of such results. The fear is that giving this acid in connection with calomel, may convert the mild into a bichloride, and thus increase the risk of ptyalism.

First, it is a mistake to look upon the human stomach as a chemical laboratory. It is dominated by chemico-vital laws which preclude such chemical action as we would get in the test tube. Again, the bichloride is the least apt of all mercurials to produce ptyalism, admitting of administration constantly for weeks without the probability of such effect. Again, it is very doubtful if calomel or other mercurials are ever converted into bichlorides in the human system, or that they act by reason of such chemic changes. Again, chlorate of potassium is given by many, probably with good reason,

as one of the best curatives, and even preventives, of mercurial salivation. Thus I am influenced to believe that hydrochloric acid may be administered at the same time with a reasonable amount of calomel without enhancing the risk of salivation.

A fad has grown upon the profession—that a small quantity of bicarbonate of sodium administered with calomel will prevent this specific result. This, I believe, will appear ridiculous to anyone who will give the matter a serious, reasonable thought.

Does the intervention of salivation during the use of mercury ever add to the therapeutic efficacy of the drug? Although I have in time long past imagined that I saw many forms of acute disease yield promptly on the supervention of ptyalism, I am now satisfied that what was supposed to be an effect was only a coincidence or an accident, and I would unhesitatingly answer the question in the negative. It cannot add anything to the otherwise efficacy of the agent to have salivation supervene during its employment. The profuse salivary flux may, to some extent, act as a general depletant and relieve blood tension, but the irritability, pain, disturbance of rest and sleep—to say nothing of the impairment of salivary digestion as well as gastric function, can but act as a drawback and hindrance to repair in any form of disease. Hence I would conclude that the intervention of ptyalism during the administration of mercury is a complication to be deplored under all circumstances.

Diagnosis.—The appearance of the condition during the administration of mercurials, made clearer by the existence of the predisposing conditions before enumerated; dryness of the mouth, accompanied with an unpleasant metallic taste; a peculiar odor is supposed to be always the accompaniment, and is claimed to exist prior to the ulceration of the gums, which I much doubt.

In mercurial stomatitis the exaggeration of salivary secretion precedes the stomatitis, though the latter is usually the first to be noticed. In the behavior of the gum and teeth lesions there is no appreciable difference between the stomatitis of mercury and that accompanying other diseases—that pro-

duced by other drugs or that occurring occasionally, apparently idiopathically, from causes unknown.

Differentiation.—The differentiation between mercurial salivation accompanied by ulcerative stomatitis and other forms of severe stomatitis, accompanied with sialorrhœa, sometimes assume importance from a medico-legal standpoint. I have more than once been called upon to testify in the courts in cases of this character.

Again: Physicians are often severely censured for producing mercurial salivation when the condition is in reality ulcerative stomatitis with a reflex salivary hypersecretion, all independent of mercurial influence, or it may be an intercurrent complication with some other disease, or from another drug which produces somewhat similar phenomena; so whether a physician has been administering mercury or not, in a case of ulcerative stomatitis, it is not always conclusive that the condition is one of mercurial production.

As a general rule most of these other and non-mercurial forms have their first manifestation in gum tissue and sympathetically affect the glands, while that from mercury, as before stated, starts primarily in gland tissue, and secondarily affects the gum dental and other faucial tissues. These are differential points, however, very difficult to determine, and while the physician may feel absolutely non-responsible for the condition, he may be as absolutely unable to establish his innocence by any proof.

I think quite likely, if all people who take calomel from physicians were told in plain terms what drug they were taking that the cases of mercurial salivation would be much more numerous. Hence, with these facts and possibilities before him, the prudent physician, for his own and his patient's interest, had best not be too communicative upon the subject of "what are you giving me, Doctor?" The prescription is properly written in technical terms, and the orthodox one grain of bicarbonate of sodium is combined, which quiets the fears of the patient, even if the true inwardness of the dose should be detected. This is probably the greatest good in the sodium addition.

Treatment.—If detected early and before severe ulceration

occurs, much may be done to lighten the attack. If the precaution has not been taken to open the bowels, an active purgative should be administered—one which acts by stimulating the intestinal glands, like combinations containing rhubarb, aloes and ipecac. After the bowels are thus opened the patient should be placed in a warm bath, and the skin thoroughly cleansed with soap and a flesh brush.

A few hours later a warm vapor bath to encourage free perspiration will aid in relieving the salivary glands of their vicarious labor and in freeing the blood of accumulated impurities.

The free drinking of Poland water or other pure water with a potash diuretic, will bring the kidneys into efficient and valuable assistance.

For the ulceration of the gums, cleansing of the mouth as well as possible in its very tender and sensitive condition should be done frequently with tepid water and boracic acid; an occasional application of a saturated solution of chlorate of potassium with a small amount of tincture of myrrh makes probably as curative an application as can be employed in ordinary cases.

Where the ulceration of gum tissue becomes severe and phagedenic in character, as is sometimes the case, touching the diseased parts with strong nitric acid has a good effect in arresting destructive ulceration and stimulating into reparative activity.

I have often administered a tablespoonful of the saturated solution of chlorate of potassium each hour after the appearance of the first symptoms of ptyalism, with apparent invariable benefit, and had come to look upon the treatment as almost specific until I fell into the theorizing habit, and I am now undetermined whether the treatment actually relieved or the patients recovered in despite of my treatment.

Iodide of potassium is a popular internal treatment with many. In chronic mercurial ptyalism—if there is such a thing—probably the persistent use of this remedy would be a good treatment, but I doubt its efficacy in the acute condition.

Tincture of iodine and carbolic acid might have been mentioned as useful applications in severe ulceration of gum tissue.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY—MEETING OF JAN. 19, 1900

THE NEURO-MUSCULAR ELEMENTS IN HIP JOINT DISEASE.

Dr. N. M. Shaffer read a paper, of which the following is an abstract: If, as was generally conceded, the origin of hip joint disease was in the epiphysis, a great centre of growth and development supplied from the central, spinal and great sympathetic nerve centres, it would be readily seen that the presence of a foreign body like the bacillus of tuberculosis in such an osteitic focus would cause serious nerve irritation.

The following neuro-muscular elements had been recognized and described: 1, Involuntary tonic muscular contraction. 2, Muscular atrophy. 3, Reduced faradic reaction. 4, Increased muscular excitability. Together they presented a clinical picture of an irritated peripheral nerve lesion, and gave expression to a distinct reflex spinal condition. They were absent from a joint suffering a simple injury, and from primary tuberculous degeneration of synovial membrane, which was comparatively simple in structure and nerve supply.

REFLEX MUSCULAR SPASM.

This sign had not been noticed early in his practice by the reader of the paper, who had spoken of it in 1872 as a "reflex muscular spasm"—the first time, so far as he was aware, that the term had been applied to the sign. The occurrence and character of the spasm were unmodified by opium or chloral,

but it was annulled by ether or chloroform. It produced joint deformity, and sometimes simulated ankylosis. Clinically it was of the utmost importance. Its presence was the first sign of the disease, and its absence the surest warrant for the suspension of treatment. It was involuntary, tonic, tetanoid.

When passive motion reached a certain point, at which the intra-articular pressure excited nerve irritation, the muscles involved, hitherto quiet, suddenly contracted and resisted further motion. When that point was reached the alert joint sense almost talked to the observer. When convalescence approached and actual immobilization was no longer required, the motion permitted by the apparatus used should be to the inner side of the point indicated by the spasm. Protection, however, should be maintained until the joint was free from reflex muscular spasm, when the patient might safely be restored to a gradually increasing use of the weakened limb freed from its diseased joint. Cases illustrating the ill effects of not heeding this indication were related.

MUSCULAR ATROPHY.

In this sign of joint disease we were dealing with something more than the effect of disuse. It was far from being functional atrophy. Although an early, important and expressive sign, its significance was impaired at a later stage by the incidental effects of mechanical treatment, which included rest and compression. This was to be borne in mind when the patient and his friends were apt to think that the atrophy was entirely the result of maintaining too long the restraints of treatment.

Before applying electricity to the muscles involved, the reader of the paper had surmised that reduced faradic reaction would be found. It was seen to be uniformly present in all of the atrophied muscles which were subjected to the electrical test. In 1892 increased muscular excitability was shown by Dr. E. G. Brackett to be a fourth constant neuro-muscular element in hip joint disease, readily demonstrated early in the disease by the exaggerated patellar tendon reflex.

DISCUSSION OF REFLEX MUSCULAR SPASM.

Dr. V. P. Gibney said that the reflex muscular spasm was

valuable as an aid to correct diagnosis and of great assistance in determining the time when to give up protective treatment. It was difficult, however, in every case to recognize the final disappearance of this sign. The best test of a joint which had been long under treatment was the use of the limb for one or two weeks, even in spite of the spasm. If, after free use, close observation revealed an increase in motion, the brace might be discarded, but if the range of motion had decreased, with perhaps a little more spasm, mechanical treatment should be resumed.

Dr. T. H. Myers said that the presence of synovial tenderness, or peri-articular pain, or stiffening of the affected joint, or neighboring joints, from prolonged immobilization, might easily make difficult a clear recognition of the resistance to motion made by reflex spasm. It was better to err by attributing the resistance arising from these causes to reflex action than to make the mistake of not recognizing the presence of the tetanoid spasm. He related the recent history of a boy who had been entirely free from all other signs, in whose case a positive, afterwards confirmed, diagnosis was made on the presence of slight reflex spasm near the limit of passive motion; and the history of a girl seen ten years ago, who on superficial examination appeared to have been cured of acute hip disease. There was wide motion and no lameness. When, however, the thigh was flexed and at the same time prevented from outward rotation and abduction, a slight reflex muscular protection was found at the limit of motion. As the parents objected to a further continuance of treatment, the patient was dismissed "improved but not cured," to suffer a return of the acute symptoms a few months later.

Dr. G. R. Elliott thought that there was no hard and fast rule as to the discontinuance of treatment. Instruments should be used readily, permitting whatever increase of motion the symptoms warranted, to be discarded only when free movements for a considerable time were followed by no bad results.

Dr. W. R. Townsend recognized the nervous complications of joint disease and the practical value of reflex contraction as a clinical sign in disease of the hip joint.

Dr. H. L. Taylor acquiesced in the views presented—first, that reflex contraction was the earliest sign of hip disease; and second, that so long as it persisted treatment of the joint could not be safely discontinued—views generally, if not universally, accepted by American orthopedic surgeons.

Dr. R. Whitman agreed with the now commonly accepted view of the diagnostic significance of the reflex muscular spasm of hip disease. He thought that muscular spasm in convalescence corresponded to the acuteness rather than the area of the intra-articular process, and called for absolute restriction of motion in addition to protection for the completion of motion.

Dr. A. B. Judson said that John Hunter had not noticed the peculiar action of the muscles in joint disease. He said (1786): "Stiffness of the joint depends on the involuntary contraction of the muscles. * * * I think this arises from sympathy, or a consciousness of the parts being unable to answer to the action of the muscles, and it comes nearest to human reason of anything in the body." The words "on guard" (H. C. Davis), and the graphic expression, "*vigilance musculaire*" (Vorneuil), had been applied to the watchful attitude of the muscles in joint disease. Though present in other diseased joints, reflex muscular action was seen best in the hip, because, being a ball and socket, it depends more than any other kind of joint on its muscular system for both motion and stability. For this reason reflex muscular contraction was of great importance in the diagnosis of the earliest stage of hip disease, when the lameness is inconstant, the atrophy equivocal and the pain referred to the knee. It was of no less importance as a sign in convalescence.

Dr. Myers said that ten years ago he had observed five patients affected with hip disease, each of whom received a number of injections of tuberculin. He had made twenty or thirty tests of the muscular spasm in each case, and it was found that in the reactions caused by the injections the spasm became more alert as the temperature rose and diminished with the fall of the temperature.

Dr. Elliott said that nerve irritation at the site of the disease was reflected through the cord and gave rise to the spasm of the muscle.

Dr. W. Truslow said that the fact that slowly applied and progressively increased mechanical traction completely and quickly overcame the muscular action, suggested the tetanoid quality of the spasm.

Dr. F. Peterson thought that the word "tonic" expressed the condition of the muscles in hip disease, and that the word "tetanoid" was not applicable. Apart from a reference to the reflex theory, the tonic spasm might be explained on the theory of an irritation of the cells of the nerves connected with the joint in the same way that the tonic spasm in muscular rheumatism, so called, of the sterno-cleido-mastoid muscles is supposed to come from irritation due to some poison affecting the nerves. Hyper- and hypo-tonia of the muscles might be here considered. In locomotor ataxia hypo-tonia is referred to destruction of nerve fibres, and the muscles in joint disease might by some irritation be kept in a condition of settled hyper-tonia.

Dr. Taylor thought that tetanoid had a certain suggestiveness, but he preferred the word "tonic," or some one of the other terms which were in general use.

Dr. Elliott thought that tetanoid better than tonic defined the character of the spasm, which was sometimes clonic.

Dr. Myers thought it probable that a similar spasm might attend non-tubercular lesions of the bones and joints, such as partial fracture or complete fracture without displacement. He thought he had seen spasm very like that of hip disease in such cases.

Dr. Taylor said that there was nothing especially diagnostic of the tuberculous condition in tetanoid or reflex spasm, which might appear different at different stages, or in different cases, of tuberculous disease, as it did in given cases of such different affections as tuberculosis, osteo-myelitis, rheumatism and synovitis, the spasm depending on the location and grade of the irritation rather than on its pathological origin. It would not be often found in synovitis.

Dr. Whitman said that reflex spasm as an evidence of the irritation and sensitiveness of a joint was not found in synovitis and was not restricted to tuberculous disease, although that disease was its most common cause,

DISCUSSION OF MUSCULAR ATROPHY.

Dr. E. D. Fisher said that these signs of hip disease could be referred to the reflex action of the spinal cord. But using the term reflex did not go far as an explanation. The cerebrum is not involved. Serious implication of the spinal cord or the nerve supply of the muscles was out of the question, but in malnutrition of the spinal cord he thought we had possibly an explanation. On this theory the whole reflex arc would be involved. Beginning with a sensory disturbance, the irritation is carried to the cord through the posterior roots and then to the anterior horn, where it caused spinal irritation or exhaustion, if it might be called that, and atrophy. A parallel might be found in disease of the fifth nerve with reflex irritation of the seventh, causing spasm of the face in which removal of the cause of irritation in the nerve or the ganglion relieved not only the pain but the spasm.

The term "reflex" conveyed little or no explanation unless it became part of some coherent plan, the result of reasoning and fortified by post-mortem examination. He recalled a case of ankylosis of the knee and atrophy, the result of an injury at the age of 7, and followed by an autopsy at the age of 41. There was marked atrophy of the anterior horn in the segment corresponding to the knee and in the cerebral convolution controlling that part of the body. It was common to find atrophy thus localized after the loss of a member in early life.

Altogether, the presence of these elements in hip joint disease confirmed the theory of a trophic centre in the spinal cord. Wasting was common at the onset of joint disease, in which the consecutive atrophy was always more rapid than in an injury to a large nerve. Recovery was also more rapid than in poliomyelitis in which the lesion might be a destructive one.

Dr. Peterson said that an explanation by reference to the passage of an irritation to the spinal cord and its reflection along the trophic nerves to the muscles was scarcely a probable one because irritation of trophic nerves generally gave rise, as it did in any sort of nerve, to an excess of function.

In joint atrophy there was wasting away of muscles from

wasting away of trophic centres or destruction of trophic fibres. Faradic action was reduced in quantity but normal in quality.

The manner of response to the faradic and galvanic currents was normal though the muscle was wasted. The subject was interesting because of the absence of the reaction of degeneration. In the atrophies of progressive poliomyelitis, with actual degeneration of trophic centres, there was profound reaction of degeneration. In only one other class of marked muscular atrophy was reaction of degeneration absent, the class of primary muscular dystrophies, not due to any nerve lesion, in which there was destruction of the muscular fibres, which wasted away. In very marked instances of this condition there was reaction to the faradic current as in joint atrophy. Joint atrophies might be explained in a similar way, without reference to the spinal cord, on the ground that although many of the trophic fibres coming to the muscles which moved the joint would be connected with the joint, all of them were not, and when an inflammatory process in the joint destroyed trophic fibres and produced atrophy, some of the muscular fibres were not destroyed and responded with absence of the reaction of degeneration, as happened in progressive muscular dystrophy.

In rheumatism and sciatica and other painful affections, there was increased muscular excitability, as shown in the knee-jerk. The response to the stroke of the tendon was, however, too rapid to allow of a trip to the spinal cord and back, and yet it was governed by spinal cord conditions. Neither this nor the other neurological conditions found in hip joint disease need be necessarily considered in connection with the spinal cord.

Dr. Elliott said that the novel and interesting dystrophy theory might explain the atrophies of monarticular rheumatism and rheumatoid arthritis, which were distinct from the joint atrophy under discussion.

Dr. Whiting said that among other contributing factors, physiological disuse was the most important and constant cause of the atrophy of joint disease, which affected all the component parts of a limb, including the bone. It increased

for a time more rapidly when the symptoms were relieved by fixation of the limb. It followed fixation of the limb in splints after fracture of a bone.

Dr. Gibney said that much of the atrophy following the use of apparatus for several years was caused not only by disuse, but also by constricting bandages and appliances.

Dr. Elliott said that joint atrophy was specific and in no way related to the disuse atrophy nor to that which came from bandaging.

Dr. Townsend said that disuse, which was an obvious and controlling factor of the later atrophy, played a very important part in the production of the early and characteristic atrophy of joint disease, which appeared in patients confined to the bed.

Dr. J. B. Bogart said that the joint atrophy of the neurologist arose from a nerve lesion, but the atrophy of orthopedic practice had a three-fold origin in nerve implication, disuse and the restraint incident to treatment.

Dr. Taylor suggested over-work as a cause of the primary atrophy. When a muscle was exercised beyond a certain point, or subjected to prolonged electrical excitement, it atrophied, and the continuous localized sensory irritation of joint disease might over-work the muscles in a physiological sense through the motor centres in the cord.

Dr. Fisher said that the muscular atrophy caused by over-use could be referred to spinal cord atrophy, as was almost conclusively proved by the experiments of Hodge, who had recorded atrophy in the spinal cord cells of pigeons which had been flying for hours.

Dr. Taylor said that in long-standing cases of diseased hips there was an interference with the circulation and an extensive atrophy, affecting even the bones, which doubtless had several factors, including retarded growth of the parts affected, in addition to the early joint atrophy. Similar effects were to be seen in the wake of infantile paralysis and fracture of the femoral neck in children, and in certain congenital malformations.

Dr. Judson said that in many cases of serious disability of a lower extremity a large part of the asymmetry was due to hypertrophy of the unaffected limb from over-use.

Dr. Peterson said that the results of joint atrophy could not be confounded with those of disuse. In a shoulder joint immobilized by acute arthritis there was rapid atrophy of the muscles which was absent from a shoulder joint immobilized in any other way. In an injury of the brain—as in apoplexy—there was disuse, but no atrophy of the muscles at all. In fracture of the femoral neck in a child, one side of the body did not grow as fast as the other—not from atrophy, but from retardation of growth on the paralyzed side. In any serious injury of an extremity, retardation of growth came from disuse or from interference with nutrition from disuse.

Dr. Shaffer said that at one time he had seen several patients with hysterical imitation of hip joint disease under treatment for months by the long hip splint, adhesive plaster and bandaging. In some of these cases there was muscular resistance, but no atrophy. After true hip joint disease the muscular atrophy might never wholly disappear, but the limb would do its work well. If considerable motion returned to the joint as the result of treatment, the patient would walk without a limp, and in ankylosis in a good position a most useful limb would result.

In his earlier studies he had found no reference to the spasm of hip joint disease in the then limited works on orthopedic surgery; but in Charcot's Lectures he had found light on the subject, and he had for many years steadfastly called attention to this interesting phase of chronic tuberculous joint disease; and inasmuch as spasm and atrophy were not observed in chronic synovitis of the knee and ankle, he had proposed that hip joint disease, like Pott's disease, was an osteitis, and not a synovitis.

In his paper he had tried to indicate when apparatus might be discarded in hip joint disease. This decision could not be rightly made until the tetanoid spasm was duly appreciated. It was not difficult to recognize it, once its peculiar characteristics were understood. He thought that the word "tetanoid" would, sooner or later, be generally considered to be applicable, or that some other word—broader than tonic and more comprehensive than reflex—would be applied by neurological students who had here a subject well worthy their in-

vestigation to the end that the profession might know the real value of the neuro-muscular elements in hip joint disease and recognize that they had a distinct pathological origin.

THE DELIRIUM TREMENS OF CHLORAL.

M. G. Ballet (*Gazette hebdomadaire de médecine et de chirurgie*, Dec. 21, 1899), who in 1893 reported to the Société Médicale des Hospitaux the first clear and circumstantial case of delirium tremens from chloral, recently communicated a second case to the Société de Neurologie. M. Ballet laid stress on the striking resemblance between the acute chloral delirium and delirium tremens; the same elevation of temperature, the same tremor of the limbs, lips and tongue; the same subsultus tendinum; the same sweats; the same reveries, with hallucinations and illusions, which are, however, less realistic in chloral than in alcoholic delirium. In the first case recorded by M. Ballet the symptoms supervened upon increasing doses of chloral; in the second, upon the abrupt discontinuance of the drug. Should chloral be abruptly discontinued? In his first case M. Ballet ordered radical and complete abstinence, and the patient died; in the second he counselled a progressive diminution of the dose, and the patient recovered—from which premises M. Ballet inclines toward the latter method.—*N. Y. Medical Journal*.

Selected Articles.

REMARKS ON THE INFLUENCE OF TECHNIQUE UPON THE RESULTS OF CLOSURE OF WOUNDS OF THE ABDOMINAL WALL.*

BY CHARLES P. NOBLE, M.D.,

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It is my intention this evening to bring before you a number of points in the technique of the closure of wounds of the abdominal wall, and to report my own experience therewith as a contribution to what I hope may prove a valuable discussion upon these subjects.

There are a number of methods advocated for the closure of the wound in celiotomy cases. What may be called the classical method is that in which interrupted through and-through sutures of non absorbable suture materials are employed. Silk, silver wire and silkworm gut have been advocated at various times. This method was universally employed by our predecessors, and probably to-day it is the method which has the greater number of adherents. The advantages of the method consist in the rapidity with which the wound may be closed, and the comparative simplicity of the technique. The objections to the method are the relative frequency of hernia following its employment, and the relatively high percentage of wound infection and stitch-hole abscesses. I shall assume that these statements do not require

* Read before the Obstetrical Society of Boston, Nov. 21, 1899.

statistical proofs. Hernia is most frequent in the case of fat subjects and in those in which drainage has been employed—especially gauze drainage. The reasons for this are anatomical and self-evident. In thin subjects, when the suturing is carefully done, it is feasible to approximate with relative accuracy the component structures of the abdominal wall, restoring these structures approximately to their normal status. When drainage is employed, this is at once prevented at the site of the drainage opening. In fat subjects the mechanical difficulties of applying the sutures bring about the same result, and the component structures of the abdominal wall are not accurately approximated, and more especially the continuity of the aponeurosis of the transverse muscles is not restored. For this reason, in my judgment, this method of closing the abdominal wound should be reserved for the small class of cases in which drainage is necessary, and another limited class of cases in which, owing to the general condition of the patient, the saving of even a few minutes in the duration of the operation is of importance. It is my opinion that the explanation of the relative frequency of stitch-hole abscesses, when this method of closure is adopted, is that in order to close the abdominal wound with a single row of sutures, it is frequently necessary to tie these sutures under tension. In this way the circulation is interfered with, the vitality of the tissues is lowered, and any germs which may be present, whether the skin cocci or other, have a favorable field for action.

The foregoing considerations caused me to abandon through-and-through sutures in 1892, and since that time tier sutures have been employed as a routine method. The character of the suture material and the method of its employment have been changed several times. From May, 1892, until January, 1897, a row of interrupted silkworm-gut sutures was buried at the level of the aponeurosis, uniting the aponeurosis, recti muscles and peritoneum; and a second row of interrupted silkworm-gut sutures was employed to unite the skin and subcutaneous fat. Subsequent to January, 1897, the peritoneum and recti muscles were united with continuous catgut sutures, and the aponeurosis of the transverse mus-

cles was united with a modified mattress suture after the method detailed in the paper entitled "A New Method of Suturing the Wound in Celiotomy" (*American Journal of Obstetrics*, Vol. xxxv, No. 4, 1897).

The results which were obtained by these methods were carefully recorded and reported to the American Gynecological Society at its meeting in Boston in 1898 ("Shall Absorbable or Non-Absorbable Ligatures and Sutures be Employed," etc. *Medical News*, Oct. 15, 1899; *Transactions American Gynecological Society*, 1898). The report embraced 472 cases, of which ten suppurated, or 2 per cent. There were two post-operation hernias—one in the cases which suppurated, or 10 per cent., and one in the 462 cases in which primary union was obtained, or $\frac{1}{2}$ of 1 per cent.

The results obtained by these methods, both from the standpoint of the avoidance of hernia and from that of wound suppuration, were eminently satisfactory. Silkworm gut as a buried permanent suture is undoubtedly an admirable suture material, provided it is aseptic and placed in an aseptic wound. This conclusion is not the result of a few experiments conducted over a limited period of time, but of ample experience extending over a number of years. I am quite aware that it has been controverted by other reporters, and that it is the current belief that perhaps 10 per cent. of buried silkworm-gut sutures will either immediately or remotely give rise to suppuration and require removal. In contradistinction to this received opinion, it can be stated that of the thousands of sutures buried in the foregoing series of cases, in not a single case has a single suture ever required removal, provided the wound healed by primary union and that the number of cases to which these buried sutures required removal was limited to ten in which suppuration of the wound took place immediately after operation. I think it well to emphasize this point for future reference.

I would call attention to the following points as requisite to obtain satisfactory results with the use of silkworm gut as a buried suture: (1) That rigid asepsis be maintained in all the details of the operation, especially as to the hands of the operator and his assistants; (2) that light-weight silkworm

gut be employed; (3) that the sutures be tied without tension; (4) that the knot be made with three ties and then the ends cut off short, so that as small a foreign body shall be left for encapsulation as is feasible.

My confidence in the value of silkworm gut as a permanent suture is such that, although it is no longer employed in my routine abdominal work, it is still used to meet certain conditions. In all nephrorraphies three silkworm-gut sutures are used to fasten the kidney to the muscles of the loin. In all inguinal hernia operations at least one silkworm-gut mattress suture is used to close the internal ring of the inguinal canal; and in all femoral hernia operations the hernial opening under Poupert's ligament is closed with buried silkworm gut. In none of the hernia operations has suppuration occurred, and in but a single nephrorraphy, of the date, March, 1896.

There are two legitimate objections which can be urged against the employment of silkworm gut as a buried permanent suture: (1) The use of interrupted sutures in closing wounds by the tier method requires a longer time than that of the continuous suture; (2) in the course of time pressure atrophy, caused by the inclusion of tissue in the grasp of the suture, may possibly lessen the strength of abdominal wall. Neither of these objections is of a radical nature, but they had some effect in influencing me in at least temporarily abandoning the routine use of silkworm gut.

In May, 1898, I adopted the use of catgut exclusively for the closure of the abdominal wounds, and since that date celiotomy wounds have been closed in the following manner: (1) The peritoneum is closed with fine cumol catgut; (2) the aponeurotic sheath of one rectus muscle (the right) is then separated from the muscle by blunt dissection, thus baring the under surface of the aponeurosis. The upper surface of the aponeurotic sheath of the left rectus muscle is then dissected clear of fat with a knife, with the object of suturing the under surface of the right aponeurosis upon the upper surface of the opposite aponeurosis. The suturing is then begun by passing the needle armed with medium chromicized catgut (sterilized by the cumol method) through the aponeu-

rosis of the rectus muscles of the left side of the wound, and thereafter by continuous suture closing the rectus muscle until the opposite end of the wound is reached. The needle is then brought from below upward through the aponeurosis upon the left side of the wound. The aponeurotic layer is then closed by passing the needle from below upward through the aponeurosis upon the right side; then passing it through the aponeurosis of the left side as in the Lembert intestinal suture; and again from below forward through the aponeurosis of the right side, and so on till the end of the wound is reached, when a single knot completes the closure of the muscles and fascia.

The subcutaneous fat is then closed with a continuous catgut suture in one or more layers, using fine catgut. The skin is next closed by the intracuticular stitch with fine catgut.

In carrying out the technique scrupulous care is given to the following points: All bleeding vessels are controlled either by forcipressure or catgut ligature; the wound is washed repeatedly with salt solution as layer after layer is closed, with the purpose of removing blood clots if present, and with the further object of washing away, in part or in whole, any germs [which may have found lodgment in the wound; care is taken to avoid tension in drawing upon the sutures, so as not to interfere with the circulation. I was never able to appreciate the logic of those advocating the so-called dry method in dealing with wounds. By this method, it always seemed to me that if the wound were infected, the more it was rubbed with dry gauze the more thoroughly the infecting germs were rubbed into the tissues, and the greater the chances of subsequent inflammation and suppuration. The reverse of this is true when wounds are carefully and freely washed with salt solution.

Before giving the results which have been obtained by this method of closing the abdominal wound, it will be well to discuss a few points which are directly connected with these results. The abdominal wall is prepared by giving the patient a warm tub bath on the two days previous to the operation, care being taken to wash well the abdominal wall with soap and water. When there are special reasons for extra cleans-

ing, such as the recent use of mustard plasters or liniments, additional washings are employed and scrubbing brush is used. On the morning of the operation, after a full bath, the abdomen is scrubbed with soap and water, the pubic hair is shaved, and the abdominal wall is then carefully cleansed with ether, alcohol and bichloride solution. A towel saturated in bichloride solution, 1-2000, is applied over the region of operation and held in place by a bandage. When the patient is upon the operating table, the field of operation is again cleaned with ether, alcohol and bichloride solution. After the conclusion of the operation, the abdominal wall is again washed with bichloride solution, and a number of layers of gauze wrung out of bichloride solution, 1-2000, is applied in its moist state over the wound; cotton is applied over this, and the dressing is held in place with sticking plaster, which dressing is not disturbed for a week. This method has been employed for ten years, and has given such uniformly satisfactory results that its details have never been varied. The adhesive plasters are used solely with the purpose of keeping the dressing in place, and not to support the abdominal wound. When long adhesive plasters are used, they are very uncomfortable for the patient, especially if the abdomen becomes much distended with gas. The chief function of the adhesive plaster is to keep the wound covered with the dressing. I am satisfied that many wounds are infected and suppurate because of the neglect of this precaution. The wound is dressed for the first time from the sixth to the eighth day. The fine catgut employed to close the skin has usually been absorbed by this time, so that the dressing consists in picking off the knots and applying a fresh dressing.

One of the most important details in securing asepsis is the method employed in sterilizing the hands. It is universally agreed that in an absolute sense this is impossible, but with a proper technique this can be approximated. The permanganate-of-potash-oxalic-acid method of disinfection has been employed in the hospital of which I have charge for the past fourteen years, and constantly during the ten years in which I have had charge. The method in use is as follows : Operations are done in the morning, before either the operator

or his assistants have soiled their hands. This is, perhaps, the most important individual point in the technique. Fifteen minutes is the time limit for scrubbing and disinfecting the hands. Green soap and a stiff brush are employed for about seven minutes, then the subungual spaces are cleaned with a sterilized wooden cleaner. The hands are again scrubbed with green soap and a brush, and are rinsed free from soap. The hands are then washed in alcohol, using gauze to scrub about the finger ends. To wash off the alcohol they are immersed in bichloride solution, 1:1000, and then in saturated oxalic-acid solution, and finally in saturated permanganate-of-potash solution. This process is then reversed. If the hands are put directly from the alcohol bath into the permanganate-of-potash solution, a reaction takes place, resulting in a sticky deposit upon the hands, which it is difficult to remove. The hands are now washed in sterilized lime water, and then in sterilized water. For the past year, after this has been done, rubber gloves, which have been boiled for fifteen minutes, are put on. This method gives approximately perfect results, so far as wound infection is concerned.

The methods employed in the performance of the Alexander operation are very similar to those used in dealing with the ordinary celiotomy wound. March 2 of the current year I reported my experience with this operation before the Philadelphia Obstetrical Society (Alexander's Operation, *American Gynecological and Obstetrical Journal*, May, 1899). At this time sixty-two operations had been performed. Since that date there have been six additional cases, making a total of sixty eight. The teachings of Edebohls have influenced me largely in this operation, corrected, of course, by the results of my own experience. So far as their influence upon the healing of wounds is concerned, I think it only necessary to emphasize the following points: All hemorrhage is arrested either by forcipressure or catgut ligature, so that there is no opportunity for the collection of blood in the wound after its closure. Special care is exercised not to draw the sutures too tight, especially those which embrace the ligamentous structures of the abdominal wall and the round ligament. The circulation in these structures after operation is

not good, and tightly-placed sutures would necessarily result in strangulation, and probably in suppuration.

It is not my purpose to go into details concerning the technique of Alexander's operation. Any one interested in this is referred to the above paper. In general I have followed the technique laid down by Edebohls, with the exception that instead of merely approximating the divided edges of the aponeurosis of the external oblique, that one layer of the aponeurosis is superimposed upon the other and there sutured, as is the case with the median celiotomy incision. The Edebohls technique, after the drawing out of the round ligaments, consists essentially in the performance of a Bassini hernia operation, the round ligaments being embraced in the sutures which unite the internal oblique muscles to Poupart's ligaments. This, I believe, is the reason for the absence of post-operative hernias when this technique is employed. This sequel has been entirely absent in my own cases.

Suppuration has occurred in but one of the above series of Alexander operations, and in this case it was limited to the subcutaneous fat. Infection took place in this case, I am satisfied, through the efforts at cleansing the vulvar region after the performance of the Alexander operation, preliminary to the repair of a complete tear of the perineum. It is frequently stated that the pubic region and the groin are especially prone to suppuration. This experience, and the fact that in none of my operations for inguinal or femoral hernia has suppuration occurred, make me confident that suppuration is not due to the region involved, but to faulty technique on the part of the surgeon, or—what is more usually the case—the failure to apply a fixed dressing. This is a point of such importance as to be worthy of emphasis. The double spica bandage which is commonly employed by surgeons to retain the dressings in place is objectionable unless removed after twenty-four or forty-eight hours, because it is inevitable that the bandages about the inner surfaces of the thighs will become soiled when the bladder and bowels are evacuated. For the Alexander operation the same dressing is used that is employed for the median celiotomy wound, with the exception that in addition to the transverse adhesive straps, others are

placed around the inner surface of the thighs, then from within outward, and below upward across the lower portion of the abdominal dressing, the outer ends of the straps being applied to the posterior surface of the pelvis. These straps keep the dressing from slipping up and exposing the lower ends of the pubic wounds. The nurse has instructions to watch these straps and the dressing. If the straps become loosened fresh ones are applied, and if the dressing is soiled the wound is immediately freshly dressed.

From May 28, 1898, to Oct. 10, 1899, 224 celiotomies and Alexander operations have been performed in which the tier method of suturing the wound was employed. In this series of cases catgut only was employed. Herniotomies have not been included in this list, and operations in which through-and-through sutures have been employed have been excluded. Two celiotomy wounds and one Alexander operation wound suppurated, or 1.3 per cent. In addition, there was a failure of union at a small point in the skin in three cases. In one patient, a fat woman, the wound was torn open through the fatty layer by the patient turning on her side. The edges of the wound were brought together by adhesive plaster, and healing occurred without suppuration. In one patient, during a violent fit of vomiting on the fourth day, the wound burst open, allowing the escape of several feet of intestine. The intestine was washed off, the wound reclosed, and healing by primary union was obtained. In one case a post operative intraperitoneal abscess discharged through the abdominal wound some weeks after operation. In two cases of tubercular peritonitis primary union was obtained, but the chromicized catgut suture caused suppuration about six weeks after operation, and was subsequently discharged. One case of hernia is known to have occurred in the above series of cases, and in a second case a hernia has appeared about an inch above the incision. The cause of this hernia is a long-standing diastasis of the recti muscles following pregnancy.

In comparing the results secured with buried silkworm gut as contrasted with the exclusive use of catgut, the record is, perhaps, rather in favor of the silkworm gut, although the discrepancy is not great. The very distressing accident of

the eventration of the intestines on the fourth day would not have occurred had silkworm gut been used as a buried suture; nor do I believe it will often occur with the present method of suturing. The patient was one having an especially vigorous muscular system to produce the powerful intra-abdominal pressure which burst open the wound, and the probabilities are that the continuous suture which closed the rectus muscle was cut by the needle when closing the aponeurotic layer—an accident which might well happen. This is the only accident of the kind which has happened in my experience, no matter what method of suturing was employed.

Delayed suppuration in two patients who were operated upon for tubercular peritonitis is interesting as showing that the process of encapsulation, or the gradual process of absorption of chromicized catgut, does not take place so readily in persons of reduced vitality. In these two patients the catgut acted as a foreign body and produced suppuration, presumably without infection, as suppuration did not take place until at least six weeks after operation. I feel quite satisfied that it is much easier for the tissues to encapsulate a fine silkworm-gut suture than it is to absorb a medium-sized chromicized catgut suture.

The foregoing report warrants the conclusion that in celiotomy wounds which can be closed without drainage, suppuration can be reduced to 2 per cent. or less, and that post-operative ventral hernia can be reduced to a fraction of 1 per cent.

As the paper has been very discursive, I would suggest the following points for discussion: (1) The histological basis of the various methods of suturing wounds of the abdominal wall; (2) the relative advantages of different suture materials; (3) the relative advantages of different methods of closing wounds of the abdominal wall; (4) methods of suturing in Alexander's operation; (5) sterilization of the hands; (6) the use of rubber gloves as a preventive of wound infection.

In conclusion, it is only left for me to express my appreciation of the honor you have conferred upon me in inviting me to address your Society this evening, and to thank you for your attention.—*Boston Medical and Surgical Journal*.

Extracts from Home and Foreign Journals.

SURGICAL.

X RAY DIAGNOSIS OF BILIARY AND RENAL CALCULI.

Until recently the use of the radiograph has been considered unsatisfactory in cases of renal calculi, and useless in detecting gall-stones. Of late, however, considerable improvements in technique have been made.

Leonard, in the *Philadelphia Medical Journal* of Jan. 6, 1900, and the *Annals of Surgery*, February, 1900, has discussed the subject of renal calculi very exhaustively. He has shown that the principal difficulty encountered is that the calculi are very little more opaque than the tissues of the abdomen, and consequently do not show in the negative taken. Leonard's method "is founded on the axiom that if rays are employed that will differentiate between the shadows of the tissues that are less dense than the least dense calculus, all calculi will be found. Thus, in examining for calculi we do not want rays that will penetrate all tissue, but a differentiation in shadows that will demonstrate without doubt that all calculi, no matter what their relative density, will cast shadows if present in the field of examination. Such differentiation makes the negative diagnosis absolute. The result sought for in examining for renal calculi is to obtain negatives in which shadows are shown of the tissues less opaque than the least opaque calculi."

Experience has demonstrated the fact that this tissue differentiation can be obtained by employing a large volume of

Röntgen discharge from a tube of low vacuum, or soft tube, as it is called. For this purpose a self-regulating tube is the most satisfactory. Using these methods, Leonard has succeeded in detecting calculi in the kidney and ureter twelve times out of fifty-nine cases in which the symptoms were either very marked, or uncertain, or where a negative diagnosis needed confirmation. In eight of the twelve cases so diagnosticated the presence of calculi was confirmed by operation. Seven cases in which a negative diagnosis had been made were subsequently operated upon, and no stone was found, with the exception of one case, where the error was due to faulty technique. Of particular interest is the fact that Leonard has succeeded three times in locating small calculi in the lower end of the ureter, there being only one other case on record where this has been done. A careful review of the literature shows that renal or ureteral calculi have been successfully located by the X-ray in thirty-six cases by many different observers, so that the possibility of detecting such calculi by this means may be considered to be established, and thus a very important diagnostic aid given to surgery. The absolute localization of the calculi and the precise knowledge of the number of calculi, materially facilitates and simplifies operative procedure, and precludes incomplete operation. The absolute negative diagnosis renders non-operative treatment rational, when its omission might otherwise endanger the functional activity of either or both kidneys, or even the patient's life.

Leonard thinks that the positive and negative diagnoses are rendered absolute by the present technique, but that the operator must be able to show in his negative differentiation shadows of the less dense tissues in the lumbar and pelvic regions, and that one perfect negative, showing such detail, is sufficient evidence on which to pass a negative diagnosis.—*Maryland Medical Journal.*

THE TREATMENT OF PNEUMOCOCCUS EMPYEMA.

O. Vierordt (*Deut. Arch. f. klin. Med.*, 1899, Bd. lxiv) speaks of the impression more or less prevalent in the profession that empyema from infection with the pneumococcus runs

a more benign course than that due to other micro-organisms, and compares it with his own experience, which was almost exclusively confined to children. In 1897 he met with sixteen cases of the disease, of whom five were surely due to the pneumococcus. Three of these died from extra-ordinarily severe complications. The following year he also treated sixteen cases, with two deaths. Ten were due to the pneumococcus, and one died. In other cases, a report of which is incorporated in the paper, an empyema so small as to be difficult of diagnosis reduced the patient to a critical condition, which improved after the evacuation of, at times, a few cubic centimetres of pus. These observations, he says, show exclusively the extreme variations in the malignity of the affection, which is little, if at all, dependent on the amount of pus. They further show how much risk one may run in spite of their undoubtedly frequently benign character, and irrespective of the amount of the exudate, in delaying operation. At least so far as children are concerned, and probably also for older persons, there is no difference, from the standpoint of treatment, between the metapneumonic and other forms of empyema. A prompt and complete evacuation is necessary.—*Boston Medical and Surgical Journal*.

RECOVERY FROM BROKEN NECK.

We recently reported the recovery of a hod carrier from a broken neck at a hospital in Yonkers. We have now to report the promising convalescence of a gentleman who sustained a fracture of the fifth cervical vertebra in August last while diving off his yacht into shallow water. The X-ray disclosed the fact that the fractured vertebra was pressing heavily against the spinal cord. In September last an incision was made and the laminae of the fifth and sixth cervical vertebrae were removed. The cord itself was not interfered with, but remained slightly dislocated. At the time of the operation the patient had neither motion nor sensation below the point of injury—indeed, the operation was done without an anesthetic and without any sensation on the part of the patient. There has been slow but gradual improvement in the patient's condition since the operation, and on Feb. 25 he sat

upright for the first time in an invalid chair and was able to propel himself about the room. Only certain movements of the fingers and entire mobility of his lower limbs are still uncontrolled by his will. The operation was done by Dr. Abbe at St. Luke's Hospital.—*Medical News*.

**A NEW METHOD OF SUTURE IN OPERATIONS FOR INGUINAL
AND OTHER FORMS OF HERNIA.**

L. Freeman exposes the internal ring, ligates and cuts off the sac, which is knotted on itself. The cord being held out of the way, a loop of silkworm gut is passed from without inward through the muscular tissue on the umbilical side of the ring, then carried through Poupart's ligament from within outward. Another loop is similarly inserted near the pubic limits of the opening. A piece of stiff silvered wire long enough to reach the entire length of the inguinal canal is run through the loops, which are pulled tight enough to hold it in place. Another wire is laid along Poupart's ligament between the free ends of the loop, which are firmly tied over it, thus approximating the wires and bunching a quantity of muscular tissue against the ligament. The wires are bent upward at their pubic extremities so as to protrude through the external incision, thus facilitating their removal. The ends of the wires farthest from the pubes must be so placed that they leave the new internal ring neither too large nor too small. The cord is now dropped in place over the line of union, and the aponeurosis of the external oblique united above it, the upturned ends of the wires passing through the external ring. In uniting the skin, the free ends of the loops and the ends of the wires are brought out through the incision between the stitches. In from ten days to two weeks, which is long enough to procure reasonably firm union, the wires are removed by pulling on their protruding ends. This frees the loops, which are likewise readily extracted.—*Medical Record*.

EXCISION OF JOINTS FOR RHEUMATOID ARTHRITIS.

F. A. Southam (*Lancet*, Dec. 9, 1899; *Medical Review of Reviews*, January) records three cases in which he excised joints with excellent results for rheumatoid arthritis. In the

first case a woman, aged 29, completely bedridden previously, had both knee joints and the right ankle joint excised in 1893, with the result that she was soon able to walk several miles, and continued well up to the time of writing. In the second a woman, aged 30, had both ankylosed knee joints excised in 1894 with excellent results, locomotion being restored. In the third, a woman, aged 30, the left elbow, previously ankylosed at an obtuse angle, was excised, with the result of obtaining a movable joint.—*N. Y. Medical Journal.*

MEDICAL.

SANTONIN IN EPILEPSY.

After citing the ills of surgical treatment for certain epilepsies, bromide treatment for other epilepsies, with the attendant acne of the skin and degeneration of the mind produced by this method, G. F. Lydston (*Therap. Gazette*, Feb. 15, 1900) offers as a substitute for this class of drugs a remedy quite as efficient as a palliative and perhaps more so as a curative measure. This substitute is santonin. The author disclaims priority in its use, but says that he has used it in the treatment of epilepsy for nearly twenty years, and as yet has never seen it mentioned by any other author. His attention was first directed to the value of santonin in spasmodic affections of children, in whom he has seen it given indiscriminately for spasms whether due to "worms" or not and with whom it was uniformly successful. As a result of his long experience with the drug he has proven to his own satisfaction (1) upon the average, epileptic patients show better results under santonin than under the bromides; (2) santonin acts well in cases in which the bromides for one reason or another are not at all tolerated; (3) santonin gives distinctly beneficial results where the bromides fail altogether; (4) santonin is free from injurious effects which cannot be said of the bromides. Thus, there is no resulting melancholia, mental hebetude, profound nervous and circulatory depression

and disfiguring eruptions. Whatever disagreeable effects santonin may have are not severe, as a rule, and are transitory. If santonin is given, as the text-books on materia medica prescribe, only disappointment can result. Lydston begins in the adult with a dose of from two to five grains. As its taste is not disagreeable he gives it uncombined. The dose is then gradually increased up to the point of tolerance. This he finds to be in many patients as high as twenty grains thrice daily for some weeks. As a rule, the dose is gradually increased to fifteen grains three times a day or possibly four times. The peculiar twitchings about the mouth said to be characteristic of santonin have not occurred in the adult in his experience. The most important clinical feature of the use of the drug is the yellow coloration of the urine accompanied by painful micturition and varying irritability of the kidney. This shows at least that caution in the use of santonin should be used. Idiosyncrasy must be guarded against. In some cases the combined use of bromides and santonin may be desired. A large dose of the bromide is then given at bedtime. The alternate use of santonin and bromides is often of great service.—*Medical News.*

GASTRIC ULCER.

Cases of gastric ulcer are, no doubt, frequently diagnosed as chronic gastritis on account of the similarity of symptoms, but largely due to the lack of a thorough examination of the patient. B. Reed (*Inter. Med. Mag.*, Feb., 1900) points out the important diagnostic features. The three cardinal symptoms are, pain, hemorrhage, and circumscribed tender spots. The pain, as a rule, begins soon after the entrance of food into the stomach and often remains until vomiting occurs, or until the food has been passed on to the intestine. The fact that the pain is absent when the stomach is empty and much less when liquid food only is taken is almost diagnostic. The hemorrhage may be observed by the vomiting of fresh blood, or dark changed blood, or by the passage of tarry stools. Marked circumscribed tenderness in the epigastrium just below the ensiform cartilage and to the median line, and also on the left side of the spine over the

origin of one of the last three ribs, is a most constant symptom. Vomiting of food after eating is seen in so many diseases that it is of less diagnostic value. Vomiting usually occurs from one-half to two hours after eating and is followed by cessation of pain. This distinguishes it from carcinoma. An almost constant excess of hydrochloric acid is one of the important corroborative signs of gastric ulcer. The appetite is usually good and may be excessive. Marked anemia is frequently present. The most liable complications are (1) fatal hemorrhage; (2) perforation with localized or general peritonitis, or (3) a subphrenic abscess.—*Med. News.*

OBSTETRICAL.

A CASE OF PLACENTA PRÆVIA AND RUPTURE OF THE UTERUS.

This case, reported by James Pearse, is interesting as having ended in recovery with practically no treatment. In order that union might not be disturbed, the bowels were kept locked for a week, and during this time douching was avoided for the same reason. The author says that while laparotomy is undoubtedly the ideal treatment for this complication, such cases as the above serve to prove that even when this is impossible the outlook is by no means hopeless.—*Med. Record.*

Editorials, Reviews, Etc.

PUBLISHER'S NOTICE.—The JOURNAL is published in monthly numbers of *Forty-eight pages*, at one dollar a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money-order, draft, or registered letter, should be addressed to the Business Manager, SAMUEL S. BRIGGS, M.D., Corner Sumner and Union Streets, Nashville, Tenn.

All communications for the JOURNAL, Books for review, exchanges, etc., should be addressed to the EDITOR.

MEDICAL POLITICS.

There could not well exist organization without some mixture of politics. Would that it were possible to travel the rugged road of professional life without politics; but the once-powerful brotherhood of the medical profession has now to seek protection from quackery—not alone in its ranks, but from the outside—begs, suppliant, for legal protection against ignorance in the shape of various pathies—even from the sources from which it came, the schools.

That a great change has come over the profession there is no doubt; and the change is not for the better, judging from the writings of the present as compared with the past; but a greater change has come over the legal status of the profession.

In what State is not homœopathy and eclecticism not recognized alongside of, shall we say, allopathy—no, honest medi-

cine? In a few States even that monster of the dying century, osteopathy, is recognized legally. In Ohio, the Supreme Court denies that such quackery is comprehended in the practice of medicine within the meaning of the law. True: nor is electrocution. The bone sufferer in that State, with amazing audacity, asks the legislative committee to amend the act to regulate the practice of medicine *and osteopathy*.

We are proud of the decision of Judge Toney of Kentucky in the case of Henry Nelson *vs.* State Board of Health, and the veto of Gov. Candler of Georgia ; and trust other States will quickly follow the example of sitting on the *perfect anatomist and physiologist*.

The difficulty, we believe, has arisen primarily from great numerical increase in the profession, due to a general belief that doctors have an easy time ; secondarily, to the multiplication of the schools and the consequent rivalry.

As soon as it became apparent that there was a wide divergence in the standards of the schools, medical legislation was invoked to prevent the short cut to license—at that time a diploma—and ever since the profession has seen itself gradually but surely drawn into the whirlpool of politics. Even now its embryo members are rapidly developing into active lobbyists, actuated chiefly by fear. Our State has been robbed through this agency of a medical act of which we were justly proud, and it is no longer one of the thirty-two States that do not recognize a diploma as a license to practise.

We sincerely hope our State Society will devote some of its energy to politics in the future. The good work has begun and will continue, and our State should not be lagging. The time of the Society may be too valuable, and a discussion by so large a body might not prove of so great value ; but a well selected committee could do much toward piloting the old ship through the troubled political waters.

TO THE MEMBERS OF THE MEDICAL PROFESSION
IN THE UNITED STATES.

The following letter from W. W. Keen, M. D., President of the American Medical Association, speaks for itself :

" The cause of humanity and of scientific progress is seriously menaced. Senator Gallinger has again introduced into Congress the bill for the ' Further Prevention of Cruelty to Animals in the District of Columbia,' which he has so strenuously and misguidedly advocated in the last two Congresses. It is Senate Bill No. 34. Twice the Committee on the District of Columbia has unfortunately and misguidedly reported the bill with a favorable recommendation. It is speciously drawn to seem as if it were intended only in the interest of prevention of cruelty to animals, but the real object is two-fold: 1, to prohibit vivisection, and, 2, to aid the passage of similar bills in all the State Legislatures.

" It hardly needs to be pointed out that this would seriously interfere with, or even absolutely stop, the experimental work of the Bureau of Animal Industry and the three medical departments of the Government—the army, the navy, and the marine hospital service. The animals themselves might well cry out to be saved from their friends. No more humane work can be done than to discover the means of the prevention of diseases which have ravaged our flocks and herds. All those who raise our own animals, such as horses, cattle, sheep, pigs, chickens, etc., are vitally interested in the preservation of their health and the prevention of disease.

" The inestimable value of these scientific researches as to the prevention and cure of disease among human beings it is superfluous to point out. Modern surgery and the antitoxin treatment of diphtheria alone would justify all the vivisection ever done.

"As my attention has been called officially to the introduction of the bill, I take the opportunity of appealing to the entire profession of the country to exert itself to the utmost to defeat this most cruel and inhuman effort to promote human and animal misery and death, and to restrict scientific research. It is of the utmost importance that *every physician* who shall read this appeal shall *immediately* communicate especially with the Senators from his State, shall also invoke the aid of the Representatives from his or other districts in his State, and by vigorous personal efforts shall aid in defeating the bill.

"It is especially requested, also, that all of the national, State and county societies, at their next meeting, take action looking toward the same end. If regular meetings are not soon to be held, special meetings should be called. Correspondence is invited from all those who can give any aid.

"The Committee on the District of Columbia consists of Senator James McMillan, Michigan, Chairman; and Senators J. H. Gallinger, New Hampshire; H.C. Hansborough, North Dakota; R. Redfield Proctor, Vermont; J. C. Pritchard, North Carolina; Lucien Baker, Kansas; C. P. Wetmore, Rhode Island; C. J. Faulkner, West Virginia; Thomas S. Martin, Virginia; Wm. M. Stewart, Nevada; and Richard Kenney, Delaware. Personal letters may be addressed to them, or to other Senators. Petitions should be addressed to the Senate of the United States."

A TEST OF FAITH.

In Boston a woman sustained a street-car accident whereby her foot was crushed. True to her belief, she summoned a Christian scientist, refusing to go to a hospital. The Ed-dyite arrived but refused to give treatments, advising that the

woman be removed to a hospital. This was at least worldly wise. The mistakes of the surgeon can be brought within the scope of law courts; the mistakes of medicine are more apt to be irremediable. Mother Eddy herself advises caution until the race acquires higher faith in her tomfoolery. She says: "Until the advancing age admits the efficacy and supremacy of mind, it is better to leave the adjustment of broken bones and dislocations to the fingers of surgeons, while you confine yourself chiefly to mental reconstruction." Mental reconstruction is certainly a desirable end to achieve.
—*Medical Age*.

THE SAMUEL D. GROSS PRIZE.

W. W. Keen, M.D., J. Ewing Mears, M.D., and J. Chalmers Da Costa, M.D., of the Philadelphia Academy of Medicine, trustees of the Samuel D. Gross Prize, announce that as no essay which they deemed worthy of the prize was received up to Jan. 1, 1900, the prize of \$1000 will be awarded on Oct. 1, 1901.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding 150 printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author, in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 219 S. Thirteenth street, Philadelphia," on or before Oct. 1, 1901.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

PRELIMINARY PROGRAM OF THE SIXTY-SEVENTH
ANNUAL SESSION OF THE MEDICAL SOCIETY
OF THE STATE OF TENNESSEE.

TO BE HELD AT KNOXVILLE, TENN., APRIL 10, 11, 12, 1900.

Heredity (the Presidential Address), D. E. Nelson, M.D., Chattanooga.

Chronic Non-Suppurative Inflammation of the Middle Ear, B. F. Young, M.D., Knoxville.

Dystocia, Due to Diseases of the Mother, R. J. McFall, M.D., Cumberland City.

Alcohol in the Practice of Medicine, I. A. McSwain, M.D., Paris.

Albuminuria, Frank B. Reagor, M.D., Shelbyville.

Fractures at the Elbow, J. B. Murfree, M.D., Murfreesboro.

Cystitis, J. B. Murfree, Jr., M.D., Murfreesboro.

Cæsarean Section, with Report of a Case, M. C. McGannon, M.D., Nashville.

Paper, W. G. Bogart, M.D., Chattanooga.

Pneumonia in Children, D. R. Neil, M.D., Nashville.

The Much Abused Mosquito, J. T. Griffin, M.D., Tiptonville.

Observations in Thought Pathology, C. P. Edwards, M.D., Nashville.

The Practice of Medicine as a Business, J. R. Jump, M.D., Lenoir City.

Fistula-in-Ano, J. T. Grahm, M.D., Booneville.

Treatment of Urethral Stricture, W. F. Glenn, M.D., Nashville.

The Correction of Certain Deformities of the Nasal Septum, Richard McKinney, M.D., Memphis.

Sanitary Thoughts, E. H. Jones, M.D., Murfreesboro.

A Case of Vesical Calculi, A. B. Ramsey, M.D., McMinnville.

Some Points in Pelvic Inflammation, T. J. Crofford, M.D., Memphis.

Three Cases of Atypic Pneumonia, H. C. Chance, M.D., Tazewell.

A Warning in Regard to Vaccination; Some Complications.

Work Develops, Worry Deteriorates the Brain, G. W. Drake, M.D., Hollins, Va.

Salpingo-Oophorectomy, with a Report of Three Cases, S. B. Fowler, M.D., Gainesboro.

E. J. Senns' Amputation of the Breast for Carcinoma, T. J. Happel, M.D., Trenton.

Salient Points in Appendix Operations, R. E. Fort, M.D., Nashville.

A Plea for the Differentiation of Continued Fevers, J. D. Plunket, M.D., Nashville.

Paper, S. S. Crockett, M.D., Nashville.

Surgery of the Pleura, W. D. Sumpter, M.D., Nashville.

The Anatomy and Pathology of the Rectal Valves, A. Bennett Cooke, M.D., Nashville.

An Informal Discussion of the Organic Obstuctions to Defecation, Thomas Charles Martin, M.D., Cleveland, O.

The Perfection of the Technics in Aseptic Surgery, W. D. Haggard, Jr., M.D., Nashville.

THE Western Ophthalmologic and Otolaryngologic Association will hold its next annual meeting in St. Louis, April 5, 6, 7, 1900. A most interesting scientific and entertainment program has been prepared.

THE NEW ORLEANS POLYCLINIC THIRTEENTH ANNUAL SESSION opens November 20, 1899; closes May 10, 1900. Every inducement in clinical facilities for those attending. The specialties are fully taught. Further information, New Orleans Polyclinic, New Orleans, La.

NOTWITHSTANDING the large number of hypophosphites on the market, it is quite difficult to obtain a uniform and reliable syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others in that it holds the various salts, including iron, quinine, strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

BOOK NOTICES.

SURGICAL PATHOLOGY AND THERAPEUTICS. By JOHN COLLINS WARREN, M.D., LL.D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts General Hospital. Illustrated. Second Edition, with an Appendix containing an Enumeration of the Scientific Aids to Surgical Diagnosis, together with a Series of Sections on Regional Bacteriology. W. B. SAUNDERS, 925 Walnut street, Philadelphia, 1900. Cloth, \$5 net; half-morocco, \$6 net.

Next to the classic work of Sir William Paget upon the same subject—of course now somewhat out of date—this is one of the best works upon the subject that has ever been published. In this second edition the author has made all the changes necessary to insure its being entirely modern. We cannot commend the work too highly. It possesses all the features that go to make a model text-book.

THE TREATMENT OF DISEASES OF THE NERVOUS SYSTEM: A Manual for Practitioners. By JOSEPH COLLINS, M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School; Visiting Physician to the New York City Hospital. Illustrated by 23 Engravings. WM. WOOD & Co., New York, 1900.

This new claimant for professional favor bids fair to take high rank among treatises upon this difficult branch of diseases. No class of diseases are so obscure, so baffling, so difficult of management, as those of the nervous system. Any work that will assist the practitioner in handling them will be at once appreciated. This excellent work seems well adapted to the needs of the practitioner, and should find a ready sale. It is full, exhaustive, and clear. The author is to be congratulated upon having made a splendid book.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS.

By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia; formerly Professor of Materia Medica and Therapeutics and of the Practice of Medicine in the Medical College of Ohio; Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society; Honorary Fellow of the Royal Medical Society of Edinburgh; Honorary Member of the Societe Medico-Pratique de Paris, and of various National, State and County Medical Societies. Author of a Treatise on the Practice of Medicine; of a Treatise on Medical Electricity; of a Manual of Hypodermatic Medication; of the Russell and Jewett Prize Essays, and Prize Essays of the American Medical Association and of the Rhode Island Medical Society, etc. Tenth Edition, Revised and Enlarged. D. APPLETON & Co., New York, 1900.

This work is too well known to the profession to need more than the announcement that it is now presented in its tenth edition, with such changes and additions as are required by the advance of medicine.

ELEMENTS OF CLINICAL BACTERIOLOGY: For Physicians and Students.

By Dr. ERNST LEVY, Professor in the University of Strasburg i. E.; and Dr. FELIX KLEMPERER, Private Docent in the University of Strasburg, i. E. Second Revised and Enlarged Edition. Authorized Translation by AUGUSTUS A. ESHER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital, etc. W. B. SAUNDERS, 925 Walnut street, Philadelphia, 1900. Price, \$2.50 net.

This is a translation of a well-known German work on clinical bacteriology. The modern practitioner cannot afford to ignore a new department of medicine that plays such an important part in all pathological changes, but should keep himself posted on the subject. This work seems well calculated to carry out the objects of the authors. It has been well translated and is in every particular a good book.

A TEXT-BOOK OF PHYSIOLOGY. By WINFIELD S. HALL, Ph. D. (Leipzig), M.D. (Leipzig), Professor of Physiology, Northwestern University Medical School, Chicago; Member of the American Physiological Society; Fellow of the American Academy of Medicine. Illustrated with 343 Engraving and 6 Colored Plates. LEA BROS. & Co., Philadelphia and New York, 1899.

The author has presented to the profession a text-book

differing from the orthodox works in some particulars, as will be seen by this extract from the preface:

"In approaching physiology from this standpoint the author has summarized in the introduction those principles of physics and chemistry which have a general application, and has prefixed to each chapter an abstract of the facts drawn from all three of the basic sciences which are to be applied in the succeeding text. This method possesses the obvious teaching value of confining the subject-matter of each chapter to physiology and presenting it in logical relation.

"The plan of the work adapts it to the needs of several classes of readers. Medical students will, it is hoped, find a clearly defined exposition of physiology proper, its relevant facts from chemistry, physics and morphology, and accompanying outlines enabling them to arrange their knowledge in an orderly and logical manner. Students in literary or scientific institutions who are preparing for the study of medicine or of physiology as a specialty, will find the method of the book equally adapted to their needs, inasmuch as the general and special introductions review matter which has been the subject of detailed study in the laboratories of physics, chemistry and biology, and which forms the basis of physiology."

We think the idea is an excellent one, and that the execution of it will be appreciated by students and practitioners. It is a work that shows careful preparation and a thorough conception on the part of the author of the needs of the student world. It is certain to meet with a warm reception, and will take its place among text-books on this subject.

A TREATISE ON SURGERY. By American Authors. For Students and Practitioners of Surgery and Medicine. Edited by ROSWELL PARK, A.M., M.D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, Buffalo, N.Y.; Member of the Congress of German Surgeons; Fellow of the American Surgical Association; Ex-President Medical Society of the State of New York; Surgeon to the Buffalo General Hospital, etc. Condensed Edition, with Revisions. With 625 Engravings and 37 Full-Page Plates in Colors and Monochrome. L&A BROS. & Co., New York and Philadelphia, 1899.

This edition of a popular text-book appears in a condensed

form in one volume. Were it possible, all text-books for students should be in one volume, on account of the greater convenience. The book is a composite work of the highest order of book-making, and has among its list of contributors some of the best known writers on surgical subjects in the United States. The editor, Roswell Park, A.M., M.D., is well known as a writer and surgeon. It is exceedingly well adapted to serve the needs of medical students, and is sure to meet with a well-deserved popularity.

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Original Communications.

FOREIGN BODIES IN THE BRONCHI.

WITH REPORT OF A CASE IN WHICH A BRASS TACK WAS
EXPULSED FROM THE LUNG AFTER THIRTEEN YEARS.

BY SAMUEL S. BRIGGS, M.D.

Professor of Operative and Clinical Surgery, University of the South.

The entrance of foreign bodies into the respiratory tract is not of such infrequent occurrence as one would think, and the character of bodies finding lodgment in that tract is as unexpected as its entrance is to the patient. Pieces of bone, fruit seed, various grains, beans—in fact, any small article a child can lay its hands on—are the most frequent lodgers. Pins, tacks, false teeth, and even horseshoe nails, may be found. I had occasion several years ago to remove post-mortem a horseshoe nail which had entered the trachea fourteen months previously. It was thought the nail had ulcer-

ated through the right bronchus, and that an abscess had formed about it. An operation for its removal had been undertaken, attempting to reach it through the chest walls. The patient, a delicate child, died apparently from shock.

The entrance into the larynx and trachea of a foreign body is one of the most serious accidents which can occur to an individual. Besides the mechanical obstruction to respiration, the pathological changes are very destructive to life. These changes vary according to the physical character and location of the foreign body.

In the larynx a foreign body may remain for some time without producing any other symptoms than hoarseness and cough, though its presence may excite tonic spasm of the glottis and immediate death. If sharp and irregular, it may cause an inflammation which, through the swelling, may lead to a fatal issue. In the trachea a foreign body usually produces slight symptoms at first, but on account of change of position or swelling of the mucus membrane, may cause severe dyspnea in the first twenty-four hours. The foreign body may be drawn into the bronchial tubes by inspiratory efforts, thus plugging a bronchus—or, if small, a bronchiole—crippling an entire lung or only a portion of the lung. A pneumonia may result, or a chronic bronchitis, inviting pyogenic infection, abscess and pulmonary gangrene.

Fortunately nature succeeds, it is said, in expelling the body in the majority of cases, probably in a greater number than recorded; for, as the traumatism is slight, little is thought of the accident after the expulsion, unless it has remained long enough to produce inflammatory reaction.

Foreign bodies entering the bronchi choose the right bronchus in five out of eight cases, and usually become impacted in a short while. During violent coughing it may become dislodged and expelled, or its position changed even from one bronchi to another, or lodged in the larynx in such a position as to produce a fatal obstruction.

Foreign bodies may remain quiescent for long periods. In Barbat's case a cherry-stone was expelled after fourteen years. Many cases are reported of expulsion after weeks and months.

The symptoms of the impaction of a foreign body in the

bronchus are cough, dyspnea, decreased movements, feeble respiratory murmur, increased fremitus, and dullness on percussion, due to collapse or filling of bronchial tubes with mucus.

As a result of the inflammatory reaction, ulceration with infection—usually pyogenic—secondary symptoms occur, as fever, wasting, purulent expectoration, great fetor, and sometimes hemoptosis.

The diagnosis may be difficult or impossible in the first few hours or during the quiescent period, when the body is smooth and not irritating, or small and lodged in one of the smaller bronchioles; but usually the symptoms are so marked and urgent that the diagnosis is easy.

The history, sudden onset, the violent paroxysmal coughing and dyspnea, pain, the evident movement of the body if not impacted, the increased quantity of mucus, if impacted in the bronchi, the difference in the physical signs in the two sides, make the diagnosis clear. The mistake is frequently made in believing the body has been expelled when the symptoms are not marked or have subsided. The X-ray in some cases gives most important testimony and should be resorted to in doubtful cases.

The prognosis is unfavorable. It is true that relief is frequently obtained by nature's effort, but this failing, the mortality is very high, death resulting in a very short time—in fact, may be expected momentarily unless the body is impacted, in which case the inflammatory reaction is to be dreaded. The sooner the body is removed the better, but even in extreme cases, when the foreign body was removed rapid recovery took place. There is little to be expected from encapsulation, for this rarely occurs.

In regard to the treatment, it has always been taught that the foreign body should be removed at once. At one time efforts were made to dislodge and expel the foreign body by inverting the patient, slapping the patient on the back, and by various postures and movements calculated to increase or aid the efforts of nature. Pevrissac having prepared everything for immediate operation, injected into the trachea a quantity of cold water. The cough resulting was very forci-

ble and the cherry-stone was expelled ; but all such procedures are very properly condemned by surgeons of the present, though if preparation is made for immediate tracheotomy in case of impaction in the glottis, such measures may be permissible. Until recent years tracheotomy has been the only operative measure considered, and even now it has not been supplanted, but other methods are adopted to augment its usefulness. It would seem to be the duty of every practitioner to be able to perform tracheotomy, but it requires a skill and a fixedness of purpose, on account of the surrounding conditions that not a few experienced surgeons find themselves shrinking from the ordeal.

Oftentimes it is one of the most difficult of all operations—especially in children, on account of the shortness of the neck, the labored breathing, distended blood-vessels, and the demand for haste. The surgeon feels to the fullest extent the heavy responsibility, and knows how doubtful the issue is ; for the first entrance of air into the trachea excites a paroxysm of coughing which may dislodge and expel the foreign body through the wound or through the larynx, thus relieving the patient, or a movable foreign body may become impacted in such a way as to produce suffocation, or it may be carried beyond the surgeon's reach.

Even though the operation itself be successful, the immediate removal of the foreign body may be impossible. However, it frequently occurs that the foreign body becomes dislodged, and may be coughed up several days after the operation.

Failing to remove the foreign body it may still be possible to locate it positively through the wound in the trachea.

Foreign bodies impacted in a bronchus have been removed successfully through the low tracheotomy wound, but this method is not always successful.

With the advent of the X-ray as an aid to diagnosis the operation of approaching the foreign body through the chest walls becomes justifiable, but the operation known as pneumotomy is so hazardous that it should be resorted to only after all other methods fail, and then only when the foreign body has been located beyond a doubt and the symptoms are still extremely urgent. Simply locating the body is not sufficient

to justify an operation which must have an extremely high mortality. Some surgeons have suggested that an attempt should be made to reach the bronchus from the front, but the suggestion has not met with favor. Joseph D. Bryant suggested that after resecting the ribs posteriorly the bronchus might be approached from behind, as in Nasilloff's method of reaching the esophagus. In 1896 Curtis put Bryant's idea into practice in a heroic effort to relieve an 11-year old boy, in whose bronchia had lodged a seed transfixed by a pin; but the foreign body was not removed. The child died in forty-eight hours after the last operation.

The case before mentioned, in which a horseshoe-nail found lodgment in the trachea, was operated on by the late Dr. W. T. Briggs in 1893. Under chloroform, the third, fourth and fifth ribs were resected between the vertebræ and the scapula, and the parietal and visceral pleura were sutured in order to secure adhesion before attacking the lung. The patient died in eighteen hours.

In 1887 a little girl, L. F., æt. 7, picked up a brass tack or brad used for binding papers, etc., together. The tack had two sharp prongs, and these had been sprung apart slightly. She had placed the prongs between her teeth for the purpose of straightening them; when she attempted to speak, the pin disappeared and she was seized with severe coughing and vomiting. It was thought she had swallowed the pin, but continued to cough some, especially at night. For the first few weeks she complained very little, except of a disagreeable, brassy taste. The following winter her respiration assumed a distinct whistling character, had some fever, became emaciated, and suffered a great deal. With the approach of spring she began to improve and the whistling ceased. Each year her condition improved until she reached the age of puberty, (14) when each menstruation was associated with an exacerbation of all the symptoms. In 1897, after an unusually long spell, she suffered a sharp pain complained of at the point of the chin; this was accompanied by a paroxysm of cough which expelled one of the prongs. The following winter, while in Florida, she was ill in a rather peculiar manner. There was very little cough and expectoration, she had a high

fever and excessive ptyalism. She could get no rest on account of the great flow of saliva.

In 1898 the expectoration became purulent and increased in quantity, and that year the lung was examined with the X-ray, with the hope of determining whether or not a part of the pin remained, and if possible, to locate it. The X-ray showed a distinct shadow about two inches in diameter in the left lung, just to the left of the bifurcation of the left bronchus.

In August, 1899, she visited New York and was examined, principally to determine whether there was tuberculosis or not. No bacilli were found after repeated examinations. Returning to Nashville, her health began to fail rapidly, the cough was very persistent, and the expectoration increased, becoming very fetid. She was taken to the mountains, but did not improve. She returned to the city and entered the Infirmary until the family could get settled in their new home, into which they were moving. On October 15th she returned home, after having been thoroughly stimulated for the trip. On arriving home she had a paroxysm of coughing, during which the incrustated head and remaining prong of the brad were expelled. She was relieved for a few hours, but the fetid expectoration and breath, fever, etc. continuing, she died October 19th, with all the symptoms of gangrene of the lungs, thirteen years after the accidental swallowing of the pin.

It is generally agreed among surgeons that foreign bodies in the air passages should be removed. Of course if doubt exists as to whether a foreign body remains or not, resort should not be had to operative measures. And, in cases where no symptoms result, even though the object is located, it is questionable whether operation is justifiable. Even in the face of the fact that foreign bodies have been expelled after many years (Gross reports one case after sixty years, McKenzie after seventeen years, etc.) the pathological risk the patient runs should incline one to operative measures. In the majority of cases operation is imperative and tracheotomy should be done first; this failing, resort to pneumotomy is called for. Such advances have been made in lung surgery

by pneumotomy recently and such flattering results attained in evacuating abscesses and treating gangrene of the lung that it is hoped foreign bodies may, and surely will, be removed from the bronchi by this method.

CONTRIBUTION TO THE QUESTION OF THE CAUSES OF DEATH
IN BURNS BY FIRE AND SCALDING.

E. Scholz (*Munchener medicinische Wochenschrift*, Jan. 30, 1900) gives the results of two experiments made for the purpose of ascertaining the influence of the skin in the formation of toxins in the living body. First, he compares equally extensive burns by fire, of the skin and peritoneum. Next he compares burns of the skin—in the first place, skin with the circulating blood, then in a bloodless condition. He concludes that in scalding the skin changes do not play a chemical role, but that the chemical changes result from the influence of heat on the blood. In peritoneal burns a great number of blood corpuscles are changed. The burn of the skin, because of the protecting covering it affords, is not so destructive as the same injury of the peritoneum. Scalding of the bloodless skin, which would, if the blood were present, cause death, is followed by no such effect in the anemic part. This shows that the formation of toxic substances is not concerned with the skin. Neither do the blood changes occur through the absorption of toxic materials, but death by fire or scalding is due to the combined influence of the physical and chemical waste products of the blood resulting from the effect of heat.
—*Dominion Medical Monthly*.

Selected Articles.

SOME REMARKS ON THE TREATMENT OF SYPHILIS.

BY CHARLES J. PROBEN, M.D.,

Clinical Assistant to the Chair of Gynecology, Medical Department,
Columbia College.

If comparison is invited with the class of ordinary infectious diseases, syphilis will be found to have many points in common. In fact, syphilis is regarded as an infectious disease, imparting its virulence from a local focus to the fluid tissues, producing constitutional symptoms, which abate and in their wake leave insidious constructive processes that ultimately degenerate and take on a destructive type. Practically a division of syphilis into primary, secondary, and tertiary stages is helpful in ascertaining pathological conditions and the resultant treatment, through such classifications many appear rather arbitrary and fanciful. Rather a debatable question arises, why one person should present an apparent immunity to the syphilitic virus, while another may become severely infected by inoculation. No doubt good general health offers a certain check or a bulwark in counteracting the effect of this morbid infection. Susceptibility of the individual probably depends upon the inherent vulnerability and the resistant power of the tissues of the healthy body. And the better the health appears, the more reasonable would it seem that the tissues and the circulating fluids should counteract this unknown poison. Hence no two bodies present the same fortifying and repelling influences of their tissues. Whether the disputed germ of

syphilis or is resultant ptomaines are responsible for the prolific cell growth in lues I am not prepared to state. This luxuriant cell growth steadily and vigorously attaches itself to the walls of the lymph- and the blood-vessels, and so induces many morbid tissue changes. It is surmised that this almost explosive cell distribution throughout the body wages constant war against the tissues, the cells finally implanting themselves upon some vulnerable point, producing morbid processes extending over a number of decades, or even over the lifetime of the individual. Manifestations may appear at any time without warning; in fact, in the course of time they become more alarming and destructive, finally leaving irremediable sequelæ. Implantation of syphilitic processes acts at first destructively upon the functions of the organs, later sapping their very vitality.

The morbid tissue of syphilis is of a granulation type and has certain characteristics to distinguish it from other types of tissue. Granulomata are apt to infiltrate the lymph-vessels and nodes and the wall of the blood-vessels, being accumulative primarily, but owing to poor vascularization they readily undergo destructive metamorphosis. That tissue has characteristics in common with other tissue, in that it is subject to attacks of inflammation, suppuration, and caseation, yet it is a notable and a characteristic fact that even large accumulations of syphilitic granulation tissue become entirely dissipated by vigorous antisyphilitic medication. The capacity for complete absorption and disappearance without leaving any marks of ulceration or degeneration may be caused by various factors, but it strikes me that it is the only morbid tissue which will yield to medicinal treatment. The ravages of the disease increase with age, though it might be supposed that the germicidal effect of the blood plasma would be antagonistic to syphilitic infection, and so wear out its virulence. There is a constant effort of one trying to conquer the other, health having the germicidal action of the tissues in its favor. Our gratitude is due to the natural processes of our fluids, which are usually victorious; for experience teaches that in years elimination of the infection takes place in over two-thirds of those afflicted, who fail to record any but primary

and secondary manifestations of this dreaded monster. In other words, we may put it as an axiom that over sixty-five per cent. of the afflicted escape tertiary manifestations or sequelæ, the foe being conquered by the elements of time and good health. Prolific cell hyperplasia at first gives rise to indurations; steady accumulations give rise to swellings and tumors. Progressive plastic elements increase the thickness of the walls of the blood-vessels, obliteration of their lumina may ensue, with thrombosis and embolism and a cut-off blood supply. For a vital organ like the cerebrum we see how important and necessary a good supply is—far more so than for the spinal cord. As a sequela a subsequent destruction of tissue takes place; the function at this area is forever destroyed, and it would not be feasible to suppose that this softening could ever be completely regenerated. This is one of the destructive ravages of this dread disease, and while we cannot regenerate what is completely destroyed, we may hope to check the progress of a contiguous and similar process which has not so far advanced. Suppose pressure of a similar growth upon the delicate nerve fibre produces a descending nerve degeneration with entire disappearance of axis cylinder and replacement of connective tissue, would we expect the connective tissue changes to disappear completely, after their existence for a long time has caused the nerve to cease functioning? No, undoubtedly not, though we are aware of the great reparative power of nerve fibres, especially if peripherally injured. You say, What has all this to do with syphilis? A great deal, I say; because many of us expect to cure all kinds of lesions if they are syphilitic in character; we do not consider that they are sequelæ, which fail to respond to treatment, though they may have been caused by syphilis. Especially does this argument hold good in various cerebral affections of an organic type, excluding functional and nutritional diseases, in which syphilis plays a very important role as a causative factor—in fact, the most important, excluding hereditary, worry, excitement, alcohol, etc. Nerves are far more prone to become regenerated, but they never can replace connective-tissue changes; restoration is as impossible in descending degenerations as it is impossible to restore cerebral

softening when function has once become lost. In these lesions we must not expect too much from treatment, though we may be able to inhibit a further extension of the disease. There is no relation between a primary focus of infection, which may be very minute, and later manifestations, which may appear very severe and destructive. As a rule, from the local focus of infection we have little to fear; it is the harbinger of an already infected system, which may be followed by syphilodermata and a febrile movement. The multiform eruption of the skin need give us less apprehension than the visceral complications, which are apt to appear later, affecting the functions seriously and inducing structural lesions. These remarks appear generally, except to those cases dreaded so much, though fortunately rare, the cases of galloping syphilis. The mooted question, whether tentative excision of the local infection should be practised in order to induce a more favorable and attenuated disease, can be readily dismissed with the answer that extirpation is rarely practiced, though it may appear to hold out hopes of lessening the virulence of this obnoxious poison. It is well known that the cure of the focus is a simple matter, unless a mixed infection causes much suppuration, when radical means must be resorted to. Excision to-day is very much discredited, as infection readily extends and permeates the tissues with wonderful rapidity. Enlargement of lymphatic vessels and general adenopathy, especially inguinal, and the syphiloderma, usher in the second stage. If the initial lesion is a doubtful one, it is a much-disputed question whether to begin treatment at once or wait for secondary manifestations. In order to give weight to our diagnosis and to strengthen our belief, it is better to wait until constitutional evidences arise rather than subject the victim to tentative treatment which is productive of nothing but leads us into error, not only for a short time but for a number of years, when we may regret to have before us an example of disease of a questionable character. The appearance of objective signs, taken in conjunction with an initial infection which was of a dubious character, will give a picture that removes all future ambiguity as to the character of the treatment to pursue. Great injustice may be done the patient in

suspending over him a constant cloud of condemnation, whenever a symptom arises that cannot be explained, and that with great trepidation will surely be ascribed to the causative influence of syphilis. Syphilitic virus tenaciously lurks in the organism and insidiously affects the viscera and the osseous system, gradually producing serious lesions, the more rebellious to treatment the longer the process has continued.

Allusion has already been made to the resistant and overpowering action of the healthy tissues of the economy, and the possibility of a successful combat of the normal tissues with the specific poison, gradually attenuating the virus and rendering it innocuous, till at last they gain a decided victory over their weakened foe, that finds no further nidus for implantation and finally succumbs. Whatever be the character of the poison or its composition, though not an entity, it is apparently never dormant, always eager to prey upon weakened tissues, and this will explain why tissues debilitated by constitutional vices, dissipation, and alcoholic excesses succumb readily. Hence it is of the utmost importance in the treatment of syphilis to have a patient in as good a physical condition as we may possibly secure. Some of the worst cases of tertiary syphilis we see in those who in their youth have wilfully abused their constitutions, and who appear not well able to cope with the inroads of disease.

Medicinal treatment of syphilis by mercurial salts has been well known for centuries. In fact, these salts have been eminently successful in the primary stages; but the same cannot be said of iodide of potassium, though it appears absolutely necessary in the later stages to facilitate the melting away of plastic material and young connective-tissue changes. Without mercury it is impossible thoroughly to eradicate the disease and ultimately cure the patient. Some observers contend that the iodides alone are curative. This is a doubtful assertion. Mercury forms the sheet-anchor and is the greatest foe of syphilis. Symptoms of the tertiary stage frequently appear of a dubious character, but the history of the patient and the subsequent objective signs create important links in the chain of our diagnosis. The etiological factor may long have been forgotten or may have been intentionally kept from

the practitioner; the same may be said of the secondary manifestations, and no evidence may exist save a general adenopathy. Our diagnostic acumen is very much taxed, but the suspicion of syphilis lurks everywhere about the patient, and here we realize the necessity of the so-called unscientific therapeutic test. Many objections may be raised against this fallacious argument; it is only tentative, but as an example let us take an obscure cerebral disease, with an organic lesion possibly located, but whose character is unknown from its obscurity; no history of primary infection in youth, no etiological factor to assist us, and yet we are forced to accept syphilis as the most probable factor of its existence, or at least we suspect it. The family history is blank; an examination of the iris and cranial nerves, and an ophthalmoscopic examination of the choroid and the optic nerve, may assist. Providing we find an absence of a definite cause and absolutely no evidence of constitutional syphilis, the query is, what our treatment should be and whether we are justified in tentatively using antispecific remedies.

On the strength of past numerous successes and the rapid amelioration of symptoms and objective signs, though we cannot demonstrate any evidence of syphilis, we are forced to admit the frequency of syphilis as a causative factor, and our justification is well supported by a possible recovery. I am well aware that I am generalizing my remarks and am treading upon somewhat foreign ground, but an admission of ignorance is better than confident assertion of controvertible statements. It is true that heroic antisyphilitic treatment has frequently caused marked amelioration of severe brain symptoms, supposedly due to syphilis but later demonstrated to be due to other causes widely divergent and not specific in character. The truth of this objection has especially impressed itself upon me in cases of tuberculous meningitis of children, when an apparent lull in symptoms, even holding out hopes of recovery, was caused by the administration of large doses of the iodides and by inunctions, which fact tended to deceive us severely. It is difficult to account for these phenomena, save on the theory that the amelioration of symptoms could be ascribed to an increased absorption of liquid elements by a

lymphatic system, whose activity had been markedly increased by the stimulation of the drug administered. This test is not without its fallacies, and is consequently forcibly held out as irrational by the opponents of specific treatment in chronic cerebral disorders. Yet it must be contended that in these obscure cases palliation is the entire extent of our resources. The query naturally arises, whether we are justified in forcing the patient to submit to a heroic form of specific treatment when the etiological factor is in doubt. As a rule, very little detriment results from such a procedure, and much may be gained in a doubtful case. Justification of aggression by resultant cure in a single case, though it had been merely tentative, will well repay us for a dozen failures. While the plan seems unscientific and irrational, the patient's feelings are very little influenced by adherence to the strict rules of our science as long as we can hold out relief and a possibility of a cure. Especially does this apply to those young in life, when cure signifies much for their future welfare, or, if not a cure, at least a checking of the degenerative process and prevention of subsequent recurrence. Degenerative types of disease, especially with multiple patches of sclerosis as a basis, can be hardly expected to yield to treatment, though it be heroic, as no drug is known which will cause dissipation of firm scirrhous connective tissue. Though the so called stages of syphilis are an arbitrary division, yet they help us to understand more thoroughly the pathological conditions and the principles upon which a rational treatment of syphilis is based. From our present knowledge we infer that the proliferative cell growth of syphilis produces accumulative lesions, which must be affected by drugs in a way to cause dissipation or dissolution, in all probability by a process or fatty metamorphosis. Syphilitic granulomata, more than any other tissue, in fact characteristically so, completely disappears under proper treatment, leaving no vestige of their presence. This property of causing fatty degeneration is ascribed to the mercurial salts more than to any other drug. When the deeper connective tissues are affected, the iodides are especially useful in stimulating the various lymphatics to increased absorption and in arousing the emunctories to elim-

inate the products of fatty metamorphosis. Regarding the quantities of mercury and the iodides that effect this change, every case is a law unto itself, except that the drugs should be administered with firmness and heroically. Iodide toleration is usually well marked in syphilis, though various idiosyncrasies play an important role in its administration. Iodism, with its well-marked rhinorrhoea, various skin eruptions, and gastro-intestinal irritation, are drawbacks familiar to all. Symptoms of iodine may primarily be well marked and cause an interdiction of iodides; again, they may readily disappear by persistence in the drug. H. Wood even goes so far as to say that if 4 gm. of iodide of potassium is administered three times a day without producing symptoms of iodism, it shows that the patient is afflicted with syphilis. This is a dogmatic assertion, for I have frequently seen proof that idiosyncrasy against the drug is overcome by energetic persistence of administration. On the other hand, a severe syphilitic case may not tolerate even minute doses of iodides without a profound impression and aggravated constitutional disturbance being produced. When danger is imminent and deglutition is impossible, iodides may be administered per rectum. Absorption is notably enhanced by dissolving the iodide in a warm saline enema. Oral administration in the ordinary case, which calls for no particular hurry, requires average doses of from ten to twenty grains three times a day; when danger is imminent, as much as one-half ounce may be administered three times a day, and this without apparent detriment to the patient's health; in fact, as the patient improves he may put on flesh and fat. As a warning in some cases, emaciation may set in and be rapid, owing to the large doses. Careful watch should be exercised to detect this beginning waste and check its further progress. Iodides should always be given well diluted with water, preferably after meals. In but two conditions am I aware of the harmfulness of iodides. The first is in some cases of optic neuritis, in which it facilitates the atrophy and loss of function. In the second, in cases of general or pulmonary tuberculosis, iodides increase the rapid wasting of the tissues. The disappearance or rapid amelioration of grave symptoms under iodide treatment would lead us

to infer that the case is specific, or at least would offer strong presumptive evidence of syphilis, though we may have no right to assume this in the absence of a history to that effect.

Our materia medica teems with countless drugs, few of which can be considered true specifics, among which mercury occupies the foremost rank in the treatment of syphilis. Centuries have been unable to weaken the usefulness of this drug; rather has time tended to strengthen our opinion regarding its effectiveness if properly used. Besides having ascribed to it a specific action upon the doubtful germ of infection, it is supposed to act upon syphilitic granulomata, causing them to undergo a process of fatty degeneration which facilitates their absorption.

While the drug has innumerable advantages, it has many disadvantages, especially in the hands of the tyro. One of these is its marked tendency to cause local disturbances in the buccal cavity, affecting the gums and neighboring glands, giving rise to increased salivation and to pain and tenderness. Notably is the condition made worse by vulnerable spots in the mouth, especially diseased gums and teeth, which call for a thorough overhauling before a course of mercurial administration is begun. Certain salts of mercury are more prone than others to produce salivation. Whatever salt be selected by the practitioner, this tendency should always be kept in mind, and the method best adapted to the case should be chosen. There is no doubt that the economy is unable to assimilate the amount introduced, especially if given by mouth, when it has a marked tendency locally to affect the gastrointestinal tract, and if the secretions give a warning of their lessened activity. The emunctories require careful attention, especially if the kidneys seem to be in a state of acute or chronic inflammation, since they eliminate the metal and throw off quite a quantity from the system. A marked pathological condition of these organs may constitute a distinct contraindication to large doses of an irritating mercurial salt.

From time to time various plans of treatment with salts of mercury have been suggested, but the three most prominent ones are the expectant, the continuous, and the interrupted. Each has its advocates; however, rules, especially if absolute,

never take the place of brains. From time immemorial the expectant plan has held sway, which consists in administering mercury only when symptoms or objective signs appear. After their disappearance no further treatment is deemed necessary, unless signs of syphilis should again present themselves. The fallacy of this plan is that recurrence in some form usually takes place; in fact, quite frequently an aggravated explosion takes place after a period of quietude. The numerous hospital and dispensary patients generally present themselves only when some manifestation of the disease appears, and receive treatment for the time being, to be lost to view after relief. Recurrences are consequently to be expected; in fact, it is surmised ~~that~~ many severe cerebral cases occurring late in life are due to the short term of medication, which allows the poison to remain latent and to show augmented activity in later life. The continuous plan of medication appears more rational and has many advocates, foremost among whom is the older Keyes, who has formulated many nice rules. He aims at obtaining a saturation point of the system by administering large and increasing doses, as large as the system will tolerate—this only for a limited time. Mild colicky pains and a serious diarrhea determine this so-called saturation point. These are supposed to show a bare excess of the amount the system can take or tolerate, and half this quantity denotes the tonic dose. The toleration dose and the tonic dose are alternated, the possibility of abdominal symptoms being always kept in mind. After a continued administration of mercury the system seems to adapt itself to its presence, and the doses are apt to lose their therapeutic effect; markedly so is this the case in syphilis. In order to prevent this, some favor the withholding of mercury for some time, in the interim giving tonics and trying to build up the system. Owing to the necessity of withholding mercurial treatment for a short time, the interrupted plan has found many advocates, foremost among whom is Fournier. It must be remembered that those persons who are otherwise in good health present the best subjects for treatment. They respond far more readily; a less favorable nidus exists for the development of syphilitic cells, which are alert for a vulnerable point.

Hygiene offers us an important adjunct to treatment, and is responsible for some excellent results obtained at local bathing resorts, where the habits of life of the individual are completely changed. Notable in such respects is abstention from alcohol and tobacco. It has already been indicated that oral administration of mercury calls for watchfulness for symptoms arising from the gums and the buccal glands. Though this is the favorite method of administration, it will be noticed that some salts of mercury produce salivation more readily than others; also that some are more effective than others. The insoluble salts of mercury are still in vogue, though soluble ones appear to have the preference. Green iodide, once a favorite, is weak in its action, while the soluble bichloride is more effective, especially if given in conjunction with the iodide. Oral administration of mercury is especially adapted to the early stages. When it cannot be thus given, and when heroic dosage is required, inunctions and hypodermatic injections are preferable. Though the former constitute the most simple and the usual method, they furnish an additional way of introducing mercury into the system. The elegant preparation, oleate of mercury, has proved an almost signal failure in severe emergencies. Inunctions of unguentum hydrargyri, though not so cosmetic, can be depended upon when a rapid impression is desirable. One or two drachms should be thoroughly rubbed in for about one-half hour daily, until physiological effects are produced. Rubbings are at the same time helpful when local lesions exist, though situated in the deeper tissues or in the vicinity. Warm baths in conjunction facilitate the absorption of the minute globules of mercury. The simplicity of this method of introducing mercury into the system has secured for it a host of friends, who prefer it to the hypodermatic method, which has for its bugbear pain. However, when rapidity of action and certainty of dose are desired, it can be depended upon, especially if the soluble salt is used. Pain in some cases is probably due to a precipitation of the soluble salt in the blood plasma, which in turn dissolves in the alkaline fluids, assisted by sodium chloride. Theoretically and practically, this gives us a hint to use a saline solution for our menstruum, in a

syringe capped with a gold plated needle. The site selected for the injection should be the nates and the deep intermuscular tissues. If injected into the deeper layer of the true skin, a slough results; if into the intercellular tissues, pain usually follows. It is a noteworthy fact that injections seldom affect the gastro-intestinal canal. Solubility of salt should be attained, as insoluble salts must first undergo chemico-physiological changes before they can become absorbed by the lymphatics and pass the lymph nodes. Osmosis becomes more difficult the more radically different the salt is from the composition of the blood serum. Hence it seems to me that oily menstrua holding these salts in suspension are objectionable. Liquid paraffin, almond oil, vaseline oil, etc., are as objectionable as is unaseptic gray oil. Insoluble salts are numerous; calomel seems the most preferable, from the fact that it can be freshly sublimed and is then in an aseptic condition. These injections, of about gr. i. to gr. iss., should be made in a suspended form into the intermuscular tissue of the nates and repeated not oftener than once a week, allowing the salt to become slowly brought into solution. Pain may thus last a number of days, as we have a foreign body in the tissues; and such complications as suppuration and embolism are rather the exception. It appears an unscientific and a risky procedure; one failure makes us apprehensive, and is apt to curtail its further use. On the whole, soluble salts are preferable; but kidney complications should always be kept in view. Intravenous injections of bichloride have been used, and with success, in tropical malarial toxemia.

While I have but cursorily touched upon some of these interesting points of mercurial administration, much more could be said of a combination of drugs, of legions of drugs, especially of vegetable origin, which have proven signal failures in the treatment of syphilis. The necessity of improving the patient's general health and of placing him in the best hygienic surroundings, must be obvious to all. By our knowledge of the physiological functions and of the action of drugs we assist nature to resist the action of venom and successfully to cope with disease. Through the agency of the fluid elements of the body we introduce medicaments known to be capable

of coping with an enemy making serious inroads by his destructive ravages—while art assists, nature tends to heal. The deadly comrade of Venus continues to select its victims irrespective of rank or position. In the firmament of our materia medica the constellations present innumerable luminous foci, the majority of which are faint and lustreless, but among a few one remains fixed, full of lustre and lumen, with an indelible inscription upon it—"hydrargyrum."—*Med. Record.*

Extracts from Home and Foreign Journals.

SURGICAL.

A NEW METHOD OF PERFORMING PERINEAL PROSTATECTOMY.

Dr. P. J. Freyer (*British Medical Journal*, March 24, 1900) after discussing all the various operations for the relief of senile enlargement of the prostate, reports a case of enlarged prostate in a man aged 59, upon whom he operated as follows: The urethra was opened in front of the prostate on a staff and the tumor examined. A crescentic incision four inches long was made from the median raphe at the urethral wound to the coccyx. The dissection was carried deep into the ischio-rectal fossa, the rectum being retracted out of the way. The tumor of the prostate was then pressed out of the wound by means of the forefinger, passed through the urethral wound, and removed piecemeal by means of cutting forceps. Only a thin layer was left to support the mucus membrane of the bladder and urethra. A perineal tube was passed through the urethral opening into the bladder and kept in position, carrying off all the urine. The tube was removed in six days, and the patient recovered perfectly. This operation is applicable only to certain forms of the disease. Where the middle lobe of the prostate projects into the bladder, or where the tumor is too large for the finger to hook it down, McGill's operation is preferable.—*N. Y. Med. Jour.*

INFLAMMATION OF THE APPENDIX IN GIRLS AND WOMEN.

Mr. J. Bland-Sutton, F.R.C.S. (*Clinical Journal*, March 14), in reference to the former belief that inflammation of the

appendix was almost peculiar to men, points out that accurate observations show that the ratio of its presence in women to that in men is as one to three. He records twenty consecutive cases in which he removed the appendix from women in eighteen months. The intimate relations which the healthy as well as the diseased appendix has with the ovary and ovarian and parovarian cysts make it of special interest to the pelvic surgeon. It is a well-ascertained fact that the vermiform appendix not infrequently leans over the brim of the pelvis in the situation occupied by the right ovary. In such circumstances it would follow that a seriously-inflamed appendix might become adherent to the ovary. On the other hand, an inflamed ovary or Fallopian tube might involve the vermiform appendix. The position of the appendix on the brim of the pelvis, moreover, occasionally brings it in contact with the pedicle left after an ovariectomy or oophorectomy. The part played by "bacterial masses" in causing concretions in the appendix, as well as gall stones, is referred to, and the author concludes: A careful study of appendicitis in women demonstrates that the clinical aspects of this disease are even more protean than in men. In those women vaguely classed as hysterical, neurotic, or neurasthenic, who complain of indefinite pain in the pelvis, often ascribed to ovarian trouble, the source of the misery is, in a fair proportion of instances, chronic appendicitis.—*N. Y. Med. Jour.*

AN ENORMOUS VESICAL CALCULUS WITH PERFORATION OF THE BLADDER.

Xavier Delore, of Lyons (*Gaz. d. Hop.*, March 13, 1900), reports the case of an old man afflicted for years with a urinary trouble, who died without surgical intervention. There was a perivesicular phlegmon in consequence of a fistula which led into the bladder, in which an immense stone was found. This weighed 310 grammes and consisted of calcium oxalate. The individual had for a long time voided his urine through a fistula at the umbilicus—this, as the autopsy showed, being due to pointing of the phlegmona at that, the weakest point of the abdominal wall. The urachus in this case was not patent.—*Med. Review.*

SEALING OF ASEPTIC WOUND.

H. O. Marcy (*Annals of Surgery*, April, 1900) believes that clean-cut operative dissection is a very important step toward obtaining primary union. For germs to grow it is necessary to have a favorable soil, and this is produced by tearing, bungling, blunt dissection, clamping of much tissue, and tying of many ligatures. Therefore, not only should the operative field, the surgeon's hands and the instruments be rendered aseptic, but, at the end of the operation, the tissue left in the patient should be as little damaged as possible. Like tissues should be closely apposed by buried, absorbable sutures, preferably of tendon soaked in 1-1000 bichloride, and finally the skin wound closed by an absorbable subcuticular suture. (Catgut and silk are discarded because their twisted surfaces give many crevices for the lodgment of infectious material.) Such perfect apposition, with physiological rest, gives rapid primary union, and very little serum exudes. Therefore the heavy, bungling dressings in common use should be dispensed with and iodoform collodion used. There is nothing to come out, and the collodion allows nothing to enter.
—*Medical News*.

MEDICAL.

A CASE OF ACETANILID POISONING.

G. R. Summers, Middletown, Ind. (*N. Y. Med. Jour.*, March 24, 1900), reports a case in which symptoms of poisoning came on after the administration of eight grains of acetanilid in a patient who had taken much larger doses of the drug many times without any untoward symptoms whatever. The patient was a woman, 26 years old, who took four grains for a severe headache, and after half an hour another dose of four grains. Fifteen minutes after the last powder had been taken she complained of nausea and giddiness; the pain in the head suddenly ceased. In a short time respiration became difficult, the pulse rose to 140, temperature 95°, with cyanosis of the lips and finger tips. The extremities were cold, the body was

covered with profuse perspiration, the pupils were dilated, and at intervals there were strong convulsive movements, with partial loss of consciousness and great retching. After the administration of whisky and strychnine, and artificial respiration continued for two hours, the patient improved greatly; half an hour later there was a return of the symptoms, which again responded to treatment and artificial respiration. The patient was thereafter confined to her bed for four days on account of vertigo.—*Med. Review.*

EARLY DIAGNOSIS OF TUBERCULOSIS.

Since it has become the rule to examine the sputum of all doubtful cases, many errors in diagnosis are avoided. M. Henkel (*Munch. Med. Woch.*, March 27, 1900) points out, however, that frequently no expectoration can be obtained. When the physical examination of the apices is negative in these cases it is important to remember that not infrequently the tuberculous deposits may have their seats in other parts of the lung, such as the lower lobes. The first signs, as a rule, are obtained by auscultation, and consist in a dry, creaking sound, often of musical character, heard best in the suprascapular or infrascapular fossa, or in the intrascapular region. A slight evening rise of temperature is rather suggestive. Finally, where all other means fail, direct aspiration of the lung may be practised and the obtained blood examined for bacilli. If done slowly and carefully, this procedure is never attended with danger.—*Medical News.*

THE SENSE OF EQUILIBRIUM.

The sense of equilibrium, including the directions up and down, forward and backward, right and left, has its end-organ in the semi-circular canals, and possibly also in the utricle and saccule of the internal ear. The semi-circular canals form a part of the membranous labyrinth lodged in the petrous portion of the temporal bone, and to be described more fully under the sense of hearing. They correspond in position approximately to the three prime Cartesian planes, being at nearly right angles to one another. Any sudden change in the state of movement of the head causes corresponding changes in the endolymph which fills the canals, but by iner-

tia, the fluid presses more forcibly against one part of the canals than others. Thus, if from a position of rest or of moderate movement one starts rapidly forward, the fluid is thrown against the posterior walls of the canal; if a sudden movement is made to the left, the inertia causes increased pressure against the right walls of the canal, etc. Thus, the beginning, stoppage, increase, decrease or change of direction of motion, is marked by differences in the pressure of the endolymph. After a movement has been carried on for some time, evenly, the inertia of the endolymph is overcome and the sense of motion is lost, unless it is apparent to the eye, to the skin on account of increased air pressure from the front, etc. Thus, we are never aware of the motion of the earth by this sense, nor usually of a smooth-running carriage. If one runs or turns round and round in a circle and then stops, the sense of direction and equilibrium is confused, and the sensation of round and round motion persists because a current has been set up in the endolymph.—*A. L. Benedict, A.M., M.D., in Medical Fortnightly.*

OBSTETRICAL.

REDUCTION OF THE SIZE OF THE SHOULDERS IN DIFFICULT LABOR.

M. E. Bonnaire (*La Presse medicale*, March 14, 1900) mentions in detail the various procedures which have been recommended to reduce the bisacromial diameter in breech extraction. In cephalic delivery the two clavicles and the sternum are less exposed to fracture or dislocation than in a breech delivery, because the shoulders are not very immovable after the arms have been released on each side, and the clavicle can in some way glide down and be safely delivered. The looseness of their attachment to the sternum and to the acromial process is great, the internal fibro-cartilaginous disc is soft and thick, and the upper part of the thorax is exceedingly elastic, owing to the softness of the infantile ribs. The reduction of

three centimetres, which it is necessary to obtain in the diameter of the shoulders, depends upon two factors: the fixation of the clavicles and the yielding of the soft parts. The author explains the relative importance of these details, and shows how this can be accomplished by cleidotomy, the clavicles then forming a V shape. The operation has never been performed upon the living infant. It is indicated in all cases of extraction of the shoulders absolutely or relatively too large, in preference to all other mutilating operations. It is to be performed (1) in cases of pelvic deformity when the shoulders are arrested at the superior strait or in the pelvis after the extraction of a crushed head; it is then less dangerous for the maternal parts than the bringing down of the arms; (2) when the shoulders are absolutely too large to pass through the pelvis; (3) in cases of rupture of the uterus, or of threatened rupture, when it is essential to reduce to a minimum the necessary efforts of the uterus for the expulsion of the shoulders. The operation of cleidotomy is simple and is performed with ordinary scissors, such as are used for embryotomy. They must be strong and long, however. The cutting is done with the index and middle fingers as guides. The operation is elegant in that the fetus is not much mutilated, it is easy of execution, and renders extraction of the fetus easy.—*N. Y. Med. Jour.*

SIMULTANEOUS INTRA-UTERINE AND EXTRA-UTERINE PREGNANCY.

A very rare case was lately shown to the Berlin Surgical Society by Dr. Hermes of the Moabit Hospital. A woman, 30 years of age, was admitted there in a serious condition, complaining of severe pain in the abdomen, which had come on during the previous twenty-four hours. The patient was very anemic, her pulse was 120, and her abdomen was tympanitic. On the left side of the abdomen a tumor could be felt, and after some hours laparotomy was performed. The case proved to be one of extra-uterine pregnancy, and a mole was removed. The patient recovered after the operation and was discharged from the hospital in about six weeks. It was observed that menstruation, which had ceased three months

before, had not reappeared, and that the uterus was still somewhat enlarged. When the patient returned after about a month the uterus had become still larger, and it continued to grow during the following months. The symptoms pointed to the presence of a fetus in the uterus, and this diagnosis was verified six months later when the woman was delivered of a strong and normal child. In this case, therefore, extra-uterine and intra-uterine pregnancy occurred simultaneously, and it was very remarkable that the intra uterine pregnancy came to a normal termination notwithstanding the operation which was performed on account of the extra-uterine pregnancy.—*Berlin Corresp. Lancet.*

Editorials, Reviews, Etc.

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CLOSING EXERCISES MEDICAL DEPARTMENT OF THE UNIVERSITY OF TENNESSEE.

The closing exercises of the Medical Department of the University of Tennessee were held March 28th at the Vendome, a large audience of relatives and friends of the class of 1900 attending.

There were seventy-eight graduates, as follows: John A. Adkisson, Tennessee; Wm. A. Adkisson, Tennessee; Marvin Alexander, Tennessee; W. Lan Banfield, Kentucky; Alonzo J. Bean, Kentucky; A. M. Belcher, Kentucky; L. Bennett, Kentucky; M. F. Biggers, Kentucky; John W. Bowman, Kentucky; Geo. B. Breedlove, Indiana; John B. Brandon, Illinois; W. M. Breeding, Tennessee; Roy M. Buchanan, Tennessee; Thomas D. Bugg, Kentucky; James Camp, Tennessee; J. H. Carr, Tennessee; J. H. Chandler, Tennessee; Jas. W. Clift, Tennessee; J. A. Cuming, Tennessee; C. H. Davis, Tennessee; A. T. Duke, Tennessee; W. B. England, Ken-

tucky; Robert L. Eves, Tennessee; J. J. Ezell, M D., Tennessee; John W. Forest, Kentucky; T. J. Ford, Tennessee; Walter W. Ford, Missouri; Myrtille Frank, Alsace-Lorraine; Galon H. Freeman, Tennessee; Jos. A. Gallaher, Tennessee; J. J. Garrett, Tennessee; R. C. Garrett, Tennessee; Leon K. Harding, Tennessee; Robert L. Hayes, Tennessee; J. E. Hillis, Indiana; J. F. Hunt, North Carolina; Willis F. Huntsman, Kentucky; Emmett Johnson, Mississippi; R. W. Johnson, North Carolina; W. G. Johnson, Kentucky; E. J. Keene, Kentucky; G. R. Keene, Kentucky; E. LaTane Kennedy, Kentucky; Ludlow Lamblin, Tennessee; Harry Lee, Tennessee; Finis London, Kentucky; J. W. Maddox, Alabama; J. L. Mason, Tennessee; E. Gecovia Maxwell, Tennessee; Robert Levi May, Mississippi; F. B. McGarvey, North Dakota; J. N. Mecklin, Mississippi; T. R. Moore, Kentucky; W. Claude Moore, Texas; T. M. Morgan, Texas; Robert L. Norris, Tennessee; Frederick O. Northey, Michigan; E. M. Oden, Tennessee; Vester Parr, Kentucky; J. A. Pelky, California; Simeon A. Pennington, Mississippi; Luther A. Parker, Tennessee; W. E. Rawls, Texas; C. C. Ross, Tennessee; A. G. Rutherford, West Virginia; H. C. Scott, Texas; Courtney W. Shropshire, Mississippi; J. R. Shumate, Ph.G., West Virginia; M. T. Smith, Arkansas; Ira J. Tatum, Tennessee; Ross F. Terrell, Tennessee; G. W. Todd, Tennessee; Wm. J. Vinsant, Tennessee; A. M. Webb, Tennessee; H. T. White, Mississippi; J. W. White, Kentucky; James B. Woodruff, Tennessee, and Thomas H. Woolsey, Tennessee.

An interesting program, consisting of orchestral music and addresses, was rendered.

The ceremonies were opened with a prayer by Rev. Lansing Burrows, after which Robert L. Hayes, of Tennessee, delivered the valedictory.

"The Class of 1900," said Dr. Hayes, addressing the Fac-

ulty and the audience, "extends to you a most cordial welcome. To-night we have reached the goal which we have looked forward to for the past three years. We are about to go out into the wider field of life. No doctor of to-day can reach a high position in his profession without going through a thorough course at the medical college. At this time it is our duty and privilege to compliment the Faculty for the degree of efficiency that has been attained by the class. In the first hours of the morning the work of the day is mapped out. At the beginning of this new life of ours we should set our aims high and strive to achieve the distinction we aim at. Hereafter you must meet higher responsibilities, and what in the same space of time can give a wider outlook or a foundation for grander possibilities than a college education. Go forth and make the most of yourselves "

Dr. Hayes congratulated the Dean of the Faculty upon the growth of the college. "We have felt," said he, "the force of your influence. and we go away with higher ideals "

Dr. Hayes thanked the members of the Faculty who had guided the class safely and whose work, knowledge and sympathy were now most heartily appreciated.

"The spirit of the university as we have known it," said Dr. Hayes, "we hope is to be the spirit of the university to be. We leave the college in your hands. When we are gone we will stand up stoutly for her. In these last three years we have learned to know one another closely, we have shared our pleasures and our trials and now remain but the last words of farewell, spoken often, but always with new sadness. We are down together as never before and the handshake has a new feeling in it. Go we forth and God speed."

The charge to the class was delivered by Dr. William D. Haggard, Jr. It was eloquently delivered and carefully prepared, a capital finale to the medical course, impressing the

young men with their duties and responsibilities, and a resume of some of the most important medical discoveries of the century and the possibilities undiscovered. One point especially brought out was the need of a department of health in the Federal Government. In this connection, Dr. Haggard said:

"The crying need of this great republic, ladies and gentlemen, is not so much the subjugation of unwilling and benighted peoples as the annihilation of communicable diseases, which are in our midst and the murderous contagions which yearly threaten our shores. We need a Secretary of Public Health, who, as a member of the President's Cabinet, will have control of interstate epidemics and supervision of foreign commerce. England, France and Germany have each a National Department of Public Health. Why not the United States? We have a Bureau of Animal Industry to prevent trichinosis in pork and tuberculosis in cattle. But we have no efficient national control of the many scourges which threaten mankind. If Congress is successful in correcting the enormous evils of food adulteration by requiring manufacturers of staple articles of food to conform to a certain standard of purity, and to labelling adulterations as oleomargarine is labeled, it will be then a step to the throttling of the multitude of patent cures, specifics and panaceas, by requiring them to possess the properties which they claim, and to prove the guarantees of cure of which they boast. This will be the greatest advance of civilization since the abolition of slavery."

Prof. Geo. F. Mellen, of the Literary Department of the University of Tennessee, conferred the degrees upon the graduates. In doing so he impressed one thought upon the young men, loyalty to their State, the South and to the institution. "Go forward," said he, in conclusion, "in life's duties and responsibilities and meet them bravely. Let duty be your watchword."

The diplomas were then awarded, after which the prizes were awarded by Dr. William D. Sumpter. Those receiving the honors were: James B. Woodruff, of Tennessee. Paul F. Eve Faculty Medal; Myrtle Frank, Alsace Lorraine. Faculty Second Honor; James Camp, Faculty Third Honor, and special medal for work in surgical laboratory; James B. Woodruff, of Tennessee

Dr. Woodruff received the appointment in the City Hospital, and Dr. Frank to the Davidson County Hospital.

COMMENCEMENT EXERCISES OF THE MEDICAL
DEPARTMENT OF THE UNIVERSITY
OF NASHVILLE.

The commencement exercises of the Medical Department of the University of Nashville were held on the evening of March 30 at the Vendome Theater. The theater was crowded and a pleasing program was rendered, the speakers being Allen G. Hall, representative of the faculty; James Richmond Fleming, valedictorian; and Gov. Benton McMillin. There were eighty-three graduates, two of whom were young ladies, one of the young ladies, Miss Edith Grace Grant, of Guthrie, Ky., taking the first honor of the class—the University of Nashville Medal. Her mark was 98½, a general average which has been surpassed only three times in the history of the Medical Department.

The second prize, the Alumni Medal and the appointment as interne at the City Hospital, was won by John Elisha Nelson of Tennessee; and the third, the W. K. Bowling Medal and the appointment to the Davidson County Hospital, was awarded to Charles Knox Brosheer of Kentucky. Twenty-one of the class, by making an average above 85 per cent., won the distinction of honorable mention.

The exercises were opened with orchestral music, followed by a prayer by Rev. W. S. Jacobs.

The charge to the class was delivered by Allen G. Hall. The address was in nowise technical, but was very entertaining, with an inclination toward the humorous. His opening remarks must have cast a damper upon those who expected to step at once into a lucrative practice.

"In the United States," said Mr. Hall. "there are about 125,000 physicians, and, speaking from a standpoint of averages, these are each supported by 600 people in various conditions of health. About 3,000 die every year, but more than this are graduated annually. It is an important question to the young doctor how to keep soul and body together, and not how he may get rich. There are two places where he can rest assured that he will at least get his bread and meat. The first is in the remote country towns, and the second in undesirable portions of the cities. In the latter place he will find that all he gets will be his meals or meal. There will be no opportunity for riches or advancement, for this is one place where there is no hope for either. The one who goes to the remote country town will have the consolation of knowing he will be missed when he dies."

After speaking further along this rather discouraging line, Mr. Hall took up a more hopeful line of thought. "How do you account for the overcrowded condition of the profession," he asked, "when it presents such few pecuniary advantages? Some go in for higher purposes, being moved by the desire to ease pain; and others by the scientific spirit. Even, however, if a man joins the profession from the scientific spirit, there is no reason why he should not make the best out of his profession. He should have the proper ambition for a large practice, for an official place in the medical organization, some connection with one of the prominent med-

ical schools. All these are objects of legitimate ambition,"

Mr. Hall held out to the young men of the class their opportunity for assisting in broadening the professional spirit of their vocation, which, despite the hardships and discouragements, offered the greatest of opportunities to healthy, vigorous and ambitious young men.

James Richmond Fleming of North Carolina delivered the valedictory. The topic of his address was "The Life of J. Marion Sims," the great medical inventor and surgeon, whose fame was heralded over two continents, and who was honored by many foreign countries. From his life the class might draw an inspiration to supplement that drawn from their alma mater and its faculty.

His remarks were concluded with appropriate words of thanks to the faculty and friends of the class

The medals were presented by Gov. Benton McMillin. He called attention to the unusually high averages made by the entire class; and spoke of the pride taken by the State in the work being done by the University. "I thank heaven," said the Governor, "that the time has at last come when the doors of our institutions are open to women as well as to men. What you have witnessed to-night you could not have seen before the coming of Christ. You could not have seen it before the Declaration of Independence. Let it be said as a word of warning to those who have taken the first honors and of encouragement to those who have not, that those who apply themselves most assiduously will achieve the honors in life. I am thankful that we live under free institutions where combinations of industry and integrity will succeed."

After other words of similar tenor, he delivered the medals.

The graduates were as follows: Frederick Richmond Ad-
amson, James Walter Allen, Rufus Henry Allen, Thomas Ev-
erett Ashley, Virgil Henry Barton, Samuel Streyhorn Beak-

lep, David Wiggins Bennett, Gertrude Thevette Bodfish, Charles Knox Brosheer, Marshall Edward Chambers, John Callender Clark, James Orlando Cook, Zeleander E. Crawley, Marion Eugene Croft, Edward Gibson Croxdale, William Edward Curd, Allen Woodard Deane, James DeHart, Robert Lee Dozier, William Jefferson Fitts, James Richmond Fleming, Thomas Royden Frazer, Benjamin Henry Freeman, Robert Hall Garren, William Herbert Gates, Edith Grace Grant, Thaxton Richardson Guill, Ernest Hubbard Hamilton, Frederick William Hander, Laborn J. Harley, Henry H. Hartley, Albert Dillard Hatcher, Charles Hunt, Robert Stephens Hunt, William Shelley Hutton, Samuel Edward Izard, Edward Thomas Kelty, Benjamin Ewell Keys, James Willis Kerley, John Clarence Knight, James Nathan Lamar, James Edward Leach, John Riley Loftis, Eugene Elmo May, John Thomas McDonald, Charles Gresham McEarchern, Charles William McMillan, J. Preston Miller, M.D., Samuel Erskin Mitchell, James Clinton Moore, John William Morris, Richard Alonzo Napier, John Elisha Nelson, Thomas Ellsworth Oden, George Weldon Oliver, William Robert Pope, Thomas Jefferson Potter, John Lenwood Purser, James Edward Reece, Charles Lee Russell, Williams Hill Ryan, Reuben Thomas Satterfield, Robert Sory, John Winford Stevens, Dudley Stennis, Joseph Eber Stover, James Craig Strong, John Armstrong Sugg, Arthur Clarence Tinsley, Harvey Weston Turnipseed, Maxy Deander Turnipseed, Erastus Lafayette Walker, Joseph Cobb Walker, Archibald Cathey Waters, Walter Reeves Webb, Albert Wilkinson, George Elisha Winn, Isaac Dix Winston, Andrew Maury Woodson, Lee Roy Wright, Jason Wilson Wynn.

THE MARRIAGE of Dr. William Eggleston and Miss Annie Bonham Aldrich occurred at the Church of the Holy Apostles,

Barnwell, S. C., on the evening of April 18, inst. **THE JOURNAL** joins the hundreds of friends of the happy couple in wishes for their long and prosperous life. May famous M Ds. named Eggleston adorn and instruct the coming generation.

COMMENCEMENT EXERCISES OF THE MEDICAL DEPARTMENT OF VANDERBILT UNIVERSITY.

A large and interested audience attended the closing exercises of the Medical Department of Vanderbilt University, April 4, at the Vendome. The members of the faculty occupied seats on the stage, which was elaborately decorated with palms and many beautiful floral designs, the tribute of individual friends to the graduates.

The Founder's Medal and interneship of the City Hospital were awarded to H. L. Berry of Tennessee; the Glenn Medal to T. O. Burger of Tennessee, and the Edwards Medal to W. S. Lawrence of Virginia.

The honor men of the class were: J. E. Baucom, H. L. Berry, T. O. Burger, R. L. Carswell, J. S. Dye, A. Hood, Jr., Amzi Jones, A. D. Knott, W. S. Lawrence, H. A. Nesbitt, J. B. Ozier, W. H. Powers, N. A. Upchurch, G. W. Williamson and O. K. Wormack.

The exercises were opened with prayer by Dr. Lansing Burrows, followed by an address by Dr. E. B. Chappell, pastor of West End Church. His subject was "The Ideal Physician," and the address was highly instructive and interesting. He said the ideal physician was a lover of truth and a diligent searcher after it. He was a gentleman in the truest sense of the word. He said in the hour of sickness, "we want a man whose very presence is an inspiration. The physician should be a helper to his fellow-man in every meaning of the term."

The feature of the evening was the faculty charge, delivered by Dr. John A. Witherspoon. It was not only eloquent, but was rich with words of good advice to the young men about to enter upon the chosen work of their lives. Dr. Witherspoon is not only one of the most popular members of the faculty with the students, but he is a fluent speaker and a sound reasoner, and his lectures always attract universal interest; and the young men were delighted when they learned that he was to deliver the faculty charge.

Dr Witherspoon spoke of the advancement made in medical science. He congratulated the young men upon their entry into the profession at this particular time. "For," said he, "we are to-day enjoying the greatest period of scientific knowledge ever known to man, and modern journalism puts it in the reach of every man to keep fully abreast with the times, no matter how obscure or remote may be the locality which he selects as his home.

"You enter the profession just now, when speculation has given way to scientific and rational investigation.

"It is a truism too absolute to be controverted that those best qualified will be those who will reap the successes. The cultivated and enlightened public demands that the physician shall be well equipped, and if you would reap the reward of success you must not be idle, but ever studious and industrious.

"The profession is not one of ease. You are mistaken if you expect to tread along paths strewn with flowers or lie on beds of ease and comfort.

"But if you forge ahead, work without ceasing, there will come a time when you will find your reward in the consciousness of duty well done."

Dr. Witherspoon elaborated the ideas set forth, and after complimenting the students for the earnestness they had

shown, he spoke of the ways to attain success, and concluded his address as follows:

"The happiest time of a physician's life is when he passes out of the sick-room with the consciousness that he has been the means of saving a life. I had rather be a physician and stand before a great epidemic disease and hand back the dying babe to its mother, or save the mother to her children, than be a crowned king."

At the close of Dr. Witherspoon's address, Chancellor Kirkland awarded the degrees to the class, and Dr. Dudley delivered the medals and scholarships.

The scholarships awarded in the three classes were won as follows:

First Year Class—J. J. Sherrill of Tennessee.

Second Year Class (of four)—G. D. McLean of Mississippi.

Second Year Class (of three)—J. W. Hanner of Tennessee.

Degrees were conferred upon the following graduates: C. T. Allen, Tennessee; J. L. Backstrom, Mississippi; J. L. Batson, Alabama; J. E. Baucom, Mississippi; H. L. Berry, Tennessee; E. W. Blackburn, Arkansas; Wm. Bogart, Jr., Alabama; J. H. Bogle, Alabama; J. S. Bounds, Texas; P. D. Brown, Tennessee; T. O. Burger, Tennessee; J. L. Burgess, Tennessee; R. L. Carswell, Tennessee; F. D. Cartwright, Kentucky; H. M. Case, Tennessee; A. B. Collins, Alabama; D. B. Collins, Alabama; H. F. Connally, Texas; A. O. Cragwall, Tennessee; W. C. Cundiff, Kentucky; R. B. Davis, Tennessee; W. C. Duckworth, Tennessee; J. S. Dye, Arkansas; J. H. Dyer, Tennessee; R. C. Elmore, Mississippi; G. A. Foote, Texas; R. L. Gallaher, Tennessee; C. L. Goodrich, Tennessee; W. A. Gressam, Tennessee; C. W. Hall, Illinois; S. S. Hindman, Tennessee; E. W. Hillsman, Tennessee; E. A. Aogan, Illinois; E. M. Holmes, Tennessee; S. D. Holstein,

Louisiana; Alex. Hood, Jr., Alabama; T. H. Irwin, Alabama; J. L. Jarvis, Georgia; V. J. Jernigan, Tennessee; Amzi Jones, Tennessee; S. H. Jones, Tennessee; T. W. Jones, Alabama; W. R. Kennedy, Mississippi; A. D. Knott, Arkansas; E. S. Lain, Texas; E. C. Lanter, Arkansas; W. S. Lawrence, Virginia; J. H. Daws, Tennessee; C. F. Lewis, Minnesota; W. P. Lynn, Texas; Chas. P. Martin, Alabama; Claude P. Martin, Tennessee; H. G. Mertens, Wisconsin; J. A. Moore, Tennessee; H. E. Morrison, Indiana; M. P. McElhannon, Texas; W. A. Nailling, Tennessee; H. A. Nesbett, Tennessee; R. F. Nimocks, Mississippi; W. T. Owen, Tennessee; J. B. Ozier, Tennessee; R. Q. Patterson, Arkansas; G. A. Pazdral, Texas; E. D. Powell, Mississippi; W. H. Powers, Florida; N. D. Reardon, Kentucky; J. W. Reed, Tennessee; W. E. Russell, Texas; E. McC. Scott, Arkansas; Z. E. Scott, Tennessee; H. G. Sellers, Alabama; Isaac Sewell, Alabama; J. P. Sheppard, Tennessee; M. G. Shipp, Alabama; J. A. Simpson, Kentucky; E. H. Stark, Tennessee; W. T. Swink, Tennessee; M. L. Talbot, Mississippi; E. A. Timmons, Tennessee; E. L. Thuman, Indiana; E. McL. Toler, Mississippi; W. G. Trice, Texas; J. D. Tuten, Jr., Florida; N. A. Upchurch, Georgia; M. A. Warren, Georgia; Philip Warter, Indiana; Dee Williams, Texas; J. P. Williams, Jr., Tennessee; W. W. Williams, Iowa; G. W. Williamson, Tennessee; T. B. Wingo, Tennessee; O. K. Wormack, Kentucky; J. J. Yates, Tennessee.

CLOSING EXERCISES OF MEHARRY MEDICAL COLLEGE.

The closing exercises of Meharry Medical College and the Dental and Pharmaceutical Departments of Central Tennessee College, took place at the Tabernacle on the night of February 20 in the presence of a large audience.

There were thirty-seven graduates in the three departments.

The exercises were of a highly interesting character, and during the rendition of the processional march by the orchestra, the graduates, wearing the gowns and caps of the College, filed into the hall and took seats on the stage.

Mr. Danley offered the opening prayer, after which the Choral Society and orchestra of the College rendered "Kyrie et Sanctus" by Mercandante. The solos were sung Misses Cottrell and Fields.

The next music number was "Oh, Happy Day," by the Choral Society.

Dr. J. Braden, President of Tennessee Central College, then introduced Henry Thomas Jones, salutarian of the medical class, who delivered an address on "True Worth of Consecrated Physicians."

The Choral Society rendered "Oh, Hail Us, Ye Free," after which William Everett Braswell delivered the valedictory on behalf of the dental class. His subject was "The Negro in Dentistry Yesterday and To-day."

A violin and cornet duo, "Serenade," by R. Hill and W. F. Lumis, was much enjoyed.

Theodore Emmett Bryant, valedictorian of the pharmaceutical class, delivered an address on "A Plea for the Tuberculous," after which the Choral Society rendered with splendid success, "Ernani."

Dr. Hubbard, Dean of the Medical College, then introduced Dr. Gwensey, President of Roger Williams University, who spoke a few words commendatory of the work of Meharry Medical School.

Prof. Spence of Fisk University made a short talk, in which he spoke in terms of praise of the work of the different departments.

Dr. Hubbard spoke of the work for the past year, and said the first diploma would be given to Miss Flossie B. Jackson of the Pharmaceutical Department, who had passed the most creditable examination in the College, and who had also passed the examination by the State Board of Pharmacy.

Diplomas were then awarded to the following graduates:

Medical.—W. H. Alexander, Kentucky ; W. A. Allen, Texas; R. B. Ayers, Florida; T. E. Bryant, A.B., Tennessee; D. W. Byrd, A.M., Tennessee; J. L. Carwins, Georgia; J. B. Clay, Tennessee; William H. Coleman, Alabama; B. J. Covington, Texas; J. P. Fields, Mississippi; J. T. Flemister, Georgia; G. C. Harden, Tennessee; S.W. Harrison, Arkansas; C. N. Harris, Ohio; W.W. Humphrus, Texas; H. T. Jones, Georgia; C. A. Kelly, A.B., Ph.G., Georgia; J. C. Lowe, Tennessee; M. M. McBeth, Jr., Arkansas; S: L. Mitcham, Arkansas; C. A. Plaine, Georgia; W. J. Reed, Arkansas; J. E. Reed, Colorado; N. J. Ridley, Tennessee; A. D. Simington, Ph.G., Tennessee; C.C. Simms, Mississippi; R.W.Smith, B.S., Mississippi; W. H. Stephens, Alabama; L. P. Walton, Georgia; C. S. Waters, Mississippi; Lucille F. Weathers, Mississippi; T. T. Wendell, Ph.G., Tennessee; H. R. Williams, Louisiana; C. W. Wyatt, Tennessee.

Dental Department.—W. E. Braswell, Georgia; Alvester York, Illinois.

Pharmaceutical.—Flossie E. Jackson, Tennessee.

After delivering the diplomas, medals were awarded by Dean Hubbard as follows:

The gold medal offered by Dr. U. G. Mason of Birmingham, Ala., for the best examination in gynecology, to T. T. Wendell of Tennessee.

The prize offered by President Osborn and Dr. Holman for the best microscopic preparation, to the same.

The prize in anatomy given by Mrs. Nancy Brown, to Charles Paine.

Miss Lucille F. Weathers of Mississippi, one of the medical graduates, will go to South Africa as a medical missionary.

The exercises were closed with the benediction.

"ROBINSON'S LIME JUICE AND PEPSIN" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. See advertisement in this issue.

BOOK NOTICES.

TRANSACTIONS OF THE SIXTY-SIXTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE, Nashville, April 11, 12 and 13, 1899. Printed for the Society by JNO. RUNDLE & SONS, Nashville, Tenn., 1899.

This is a very creditable volume of transactions of this venerable Society. It contains a number of exceedingly valuable papers, and the discussions are free and entertaining.

A HAND-BOOK FOR NURSES. By J. K. WATSON, M.D. (Edin.), late House Surgeon, Essex and Colchester Hospital; Assistant House Surgeon. Sheffield Royal Infirmary and Sheffield Royal Hospital. American Edition, under the supervision of A. A. STEVENS, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to St. Agnes' Hospital, Philadelphia. W. B. SAUNDERS, 925 Walnut street, Philadelphia. 1900.

A very excellent hand-book that should be in the hands of every student-nurse. The author has been very judicious in selecting just what is needed for nurses, and in not offering matter not necessary for the complete education of this body of medical workers.

SANDERS' QUESTION-COMPENDS NO. 2. ESSENTIALS OF SURGERY, Together with a Full Description of the Handkerchief and Roller Bandage. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By EDWARD MARTIN, A.M., M.D., Clinical Professor of Genito-Urinary Diseases in the University of Pennsylvania. Illustrated. Seventh Edition, Revised and Enlarged, with an Appendix containing Full Directions and Prescriptions for the preparation of the various materials used in Antiseptic Surgery; also several hundred Receipts covering the Medical Treatment of Surgical Affections. Philadelphia: W. B. SAUNDERS, 925 Walnut street, 1900.

This is the seventh edition of a very admirable Question Compend, one of a series intended for the use of students

who in this day of increased scholastic duties need all the help of this kind at hand to abridge, or rather condense, their labors. A feature of the work is the description of the handkerchief and the roller bandage.

A POCKET MEDICAL DICTIONARY. Giving the Pronunciation and Definition of the Principal Words used in Medicine and the Collateral Sciences, including the Complete Tables of Clinical Eponymic Terms, of the Arteries, Muscles, Nerves, Bacteria, Bacilli, Micrococci, Spirilla, and Thermometric Scales, and a Dose List of Drugs and their Preparation, in both the English and Metric Systems of Weights and Measures. By GEORGE M. GOULD, A.M., M.D., author of "The Illustrated Medical Dictionary," "The Student's Medical Dictionary"; Editor of "The Philadelphia Medical Journal"; President, 1893-1894, American Academy of Medicine. Fourth Edition, Revised and Enlarged—30,000 Words. Philadelphia: P. BLAKISTON'S SON & Co., 1012 Walnut street, 1900.

This is a most excellent pocket medical dictionary. It has become deservedly popular with practitioners and students. We take pleasure in recommending it as one of the best of its kind ever published.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Higiene of Madrid; Member of the Association of American Physicians, etc. Assisted by CHARLES ADAM HOLDER, M.D., Assistant Demonstrator of Therapeutics in the Jefferson Medical College. Volume I. March, 1900. Surgery of the Head, Neck and Chest—Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia, and Influenza—Diseases of Children—Pathology—Laryngology and Rhinology—Otology. LEA BROS. & Co., Philadelphia and New York, 1900.

This work fills a want long felt by the profession, consisting, as it does, of a carefully-prepared *resume* of the advances and discoveries in every department of medicine. It is a crystallized summary of all important medical and surgical events as they occur, and puts them before the practitioner without his having to search through thousands of pages of

literature. The fact that it is quarterly adds to its value. The editors are to be greatly complimented on the masterly way in which they have accomplished their very difficult task. We recommend it very heartily as a most valuable hand book for every physician who desires to keep abreast with the times.

VENEREAL DISEASES: Their Complications and Sequelæ. By EDWARD L. KEYES, A.M., M.D., Late Professor of Dermatology and Genito-Urinary Surgery in the Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital etc ; and CHARLES H. CHETWOOD, M.D., Professor of Genito-Urinary Surgery in the New York Polyclinic College and Hospital; Visiting Surgeon to Bellevue Hospital, etc. Illustrated by 8 Full-Page Plates in Black and Colors and 107 Engravings. New York: WM. WOOD & Co., 1900.

This is an up-to date treatise upon a very important disease. Dr. Keyes has long been a recognized authority upon this class of diseases, and his writings on the subject have ever been regarded as standard. The work is conveniently classified, profusely illustrated, and the text clear and concise. We feel sure the work will rapidly meet with well-merited approbation, and that it will take its place among the most popular text-books for students and practitioners.

DISEASES OF THE NOSE AND THROAT. By J. PRICE-BROWN, M.B., L.R.C.P.E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Western Hospital; Laryngologist to the Protestant Orphans' Home; Fellow of the American Laryngological, Rhinological, and Otological Society; Member of the British Medical Association, the Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, etc. Illustrated with 159 Engravings, including 6 Full-Page Color-Plates and 9 Color Cuts in the text, many of them original. Philadelphia, New York, Chicago: THE F. A. DAVIS Co., 1900.

This work has been written especially for the general practitioner, within whose province falls frequently a class of diseases of the nose or throat in patients who are unable to seek the aid of skilled specialists. The author has succeeded in making a book that will prove of material aid to the physician. It is timely. It is clearly written and eminently practical. It is well illustrated. A feature of note is the use of the metrical system throughout.

Publishers' Department.

NAUSEA OF ANESTHESIA.—Nausea and vomiting following anesthetics is sometimes a distressing as well as dangerous condition, and it behooves us to avoid it as far as possible, not only for the comfort of the patient, but for the reason that in serious surgical interference it may place a life in peril.

Says the *Therapeutic Gazette*: "Blumfield, in the *London Lancet* of Sept. 23, 1899, observes that some of the chief points to be attended to in the avoidance of after-sickness are: 1. Use as little of the anesthetic as possible consistent with perfect anesthesia. 2. Wash out the stomach at the close of the operation when much mucus has been swallowed. 3. In long operations substitute chloroform for ether after three-quarters of an hour. 4. Move the patient about as little as possible during and after operation. 5. Place him on his right side in bed, with the head only slightly raised. 6. Give nothing but hot, thin liquids in small quantity for at least eight hours after. 7. Do not alter the temperature of the room for some hours. With proper attention to these points one-third of the patients operated on will be free from after-sickness, and for short operations the proportion will be much higher still. In fact, after all, administration up to twenty minutes, or not much longer, sickness will be found to be the exception."

I have for some time given Ingluvin in liberal doses (10 to 20 grains) just prior to the anesthetic, and have been favorably impressed with its use, and would suggest its thorough trial by the profession.

Two cases are reported from the Hospital College of Medicine, as follows:

Case No. 1 —Mrs. B., age 30; operated on for complete laceration of the perineum. She had twice before taken chloroform, and after each administration suffered from severe vomiting. She took three 10 grain doses of Ingluvin, six, four and two hours before the operation, and experienced almost no sickness after coming from under the anesthetic.

Case No. 2 —J. H., age 34; amputation at the hip joint. This man said he dreaded nothing but the chloroform, as at a previous operation he had suffered in a most distressing manner from that anesthetic. I directed the nurse to give him 10 grains of Ingluvin six and two hours before the operation. He vomited only once after coming from the table, and though he suffered some considerable shock and much pain, had no complaint of nausea.

Dr. E. H. Gingrich, 511 Cumberland street, Lebanon, Pa., especially recommends Ingluvin for the vomiting so frequently experienced by patients coming out of anesthesia.

Prof. Hobart Amory Hare, in *Practical Therapeutics*, writes:

1. "That chloroform or ether vomiting is probably centric."

2. "Upon the mucus membranes, ether as a liquid or in a vapor acts as an irritant and causes, when its vapor is first inhaled, great irritation of the fauces and respiratory tract."

Ingluvin is valuable on account of its mildly depressing the sensitive nerves of the stomach, thus lessening the irritation of that organ. The vomiting centres are subdued, with the result that vomiting is controlled.

For vomiting succeeding anesthesia. Ingluvin should be given (20 grains) one hour before the administration of ether or chloroform; and immediately after coming out of the anesthesia one 20-grain powder, to be followed every hour by 5-grain powders until vomiting ceases. Usually the 10-grain powder will be found effective. Ingluvin is a bland powder, prepared from the gizzard of the chicken, and contains nothing which might contraindicate its use in surgical operations as specified above.

It has long been used as a remedy to allay persistent vom-

iting of gestation with eminent success by many practitioners throughout the world. It therefore is not a new preparation, but simply an old remedy in a new capacity. Some months ago a professional suggestion was made to use it for the nausea of ether. Subsequent tests and their results have warranted its recommendation to the medical profession. Samples well be sent to any physician who wishes to test it in vomiting of anesthesia. Write W. R. Warner & Co., Philadelphia, for a sample.—*Monthly Retrospect of Medicine and Pharmacy*, February, 1900: vol. v, No. 10.

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Original Communications.

AN ADDRESS BY A. JACOBI, M.D., LL.D.*

DELIVERED AT THE BANQUET GIVEN IN HONOR OF HIS SEVENTIETH ANNIVERSARY, SATURDAY, MAY 5, 1900.

I wish I could proceed from man to man and in silence press your hands, for words of mine do not suffice for the throng of feelings that swell my heart. Before me I see men in all high walks of life, members of my own and of other professions; I see statesmen, poets, university professors and presidents—to me this illustrious assemblage is a university indeed. Of medical men there are at least two generations, few though of mine, but many of my own pupils who long ago became my masters and my teachers.

Occasions like this, which is unique in its brilliancy and scope, are apt to try a man's soul. Your appreciation and

* We are so pleased with the above address that we are glad to reproduce it for the benefit of our readers.—ED. JOURNAL.

applause is elevating and encouraging, but there is an element in it of a sorrowful sense of humiliation and discouragement, inasmuch as no man I believe can be, and I certainly am not, conscious of deserving them to the degree they are tendered. I take it for granted that I am expected to speak, in part, I suppose, of the topic of the evening—myself. But how, and what? I have been eulogized as if I were dead. Not being quite dead yet, I should not join in the praise. On the other hand, to speak derogatorily of my doings would be discourteous to those who expressed their good opinions. If, after all, you will be content with hearing a plain talk on some of the things that happened to me and to the profession this half century, I shall consider it an honor to be listened to.

When I speak to you of my aspirations on my arrival here nearly forty-seven years ago, I probably say nothing new to those who once found themselves in a strange world, ignorant and not known, without relatives or social influence. I wanted, both from necessity and from impulse, work in my profession. Young years had ripened in me the ambition to be useful either to the individual or to the masses. That is what had led me into the political life of the German revolution. I wanted to be useful to the sick, and in order to reach that aim strove to reduce my ignorance, which—aside from being a natural gift—was vastly increased in the wasting idleness of years spent in a Prussian state prison. Aspirations, however, will grow with widening horizons.

When I came here I knew nothing of American medicine. It was simply unknown in Europe. Nor was America much better informed in regard to European medicine. With the exception of a few translations from the French and a number of English republications—called American editions—European literature was but scantily known and appreciated except by the few who, like Jackson and Oliver Wendell Holmes, had enjoyed the opportunities of being with that great master, Louis. I felt I might help in building a bridge between the literatures of the two hemispheres, and Stephen Smith took my first extracts. That office was rendered more unnecessary from year to year. European languages and literatures are more studied amongst us now, and personal inter-

course between the two continents is easier and most frequent; so frequent, indeed, that there are voices that seem to advise against our young men's going to Europe to embark in post-graduate studies. That advice is to be deplored. I should improve it by advising Europeans to come here for that purpose. The more the languages that are studied, the wider the horizons that are scanned; the more different methods that are learned in medical pursuits, the more a man, young or old, will become a world to himself. By such exchange Europe has learned, will learn, to respect us as we have admired Europe.

At an early time, long before the foundation in 1857 of the German dispensary, the first medical institution in New York in which German-born physicians began their co-operation with American medicine, I took an interest in the physiology and pathology of infancy and childhood. Was it the helplessness of the patients, the apparent or alleged difficulty of the subject, or its neglect in the American literature, or all three of these reasons, that made me take hold of it, I cannot tell. But it fired my heart and imagination to suppose that if I labored for that honor, the history of American pediatrics would possibly contain *my* name amongst, as I fondly hoped, many more. Beyond that my dreams never went. I could not believe, nor do I to-night, in spite of what has been going on here, that, as Heine has it, my name should ever be mentioned among the best.

But what I know from the history of the subject is this: That after the foundation of the first special clinic for the diseases of children in the New York Medical College in 1860, and in the University Medical College in 1865, such clinics increased in number, so that there is at present no large medical school without one. A very prominent part of our good medical literature is pediatric, and there are two journals exclusively dedicated to the diseases of children, some full professorships have been established, and the teaching mainly in New York, also in Boston and Philadelphia, has in part become bedside instruction.

Much credit has been given me, I know, for the rapid development of pediatrics in our country. It is true I have the

doubtful advantage of being born in advance of my collaborators; but the time was matured for the new birth, and it so happened that many of the best medical minds of the nation became interested, as I had been. Besides, Stewart, Eberle, Meigs, hard-working, painstaking and honest J. Lewis Smith should not be forgotten. History, indeed, is not easily made by individuals, for a Washington is not born to every century or country. Not even a Bismarck could have moulded Germany into one nation if it had not been for the preparatory labors of previous generations—that of the youth of 1848 included. Nor could a Johns Hopkins create what we now know a Johns Hopkins University to mean, without the constant and conscientious co-operation of great men whose names are on every lip. It is true, however, in science alone, as pathfinders and organizers, single men *may* make history, but the tribe of Paracelsus, Morgagni, Haller, John Hunter, Bichat and Virchow is not numerous.

So you see that I have been most fortunate. A large family of brilliant pediatricists has grown up around me, both in private practice and in official positions. Through them to a great extent clinical teaching has become the acknowledged means of medical instruction, though in most of the faculty frames their branches are still considered inferior to what is called a full professorship with didactic teaching. On the other hand, pediatrics is by force of circumstances given the very highest rank; for instance, in Columbia University. It recognizes the necessity of postponing special pediatric teaching to the fourth year—that is, after the young men are deemed to be fully prepared and capable; it also considered itself lucky when the generosity of an unknown donor enabled it to establish a pediatric ward in Roosevelt Hospital for bedside instruction.

Unknown donor! More unknown or known donors are wanted. A single half-million of dollars will suffice to build and endow a child's hospital of fifty beds. When that will be accomplished, in connection with a medical school, then, and then only, will Columbia, or any other University, be able to supply the commonwealth with doctors who had ample opportunities to study the diseases of infants and children that will

always form the majority of their patients. The race of Vanderbilts, Carnegies, Sloans, Ottendorfers, Woerishoeffers, Seth Lows, Paynes and Pierpont Morgans, cannot possibly be extinct.

In 1853—I speak of what I have seen myself—the medical schools had the most accomplished teachers and, to a large part, the most immature students. The teachers were mostly men of national reputation—many of them were instructed in Europe, most of them had enjoyed a classical education. Matriculants, however, were admitted as well from the plough as from the college, and no questions asked. The curriculum extended over two years, was almost exclusively didactic, the professor would teach the same subjects annually, and clinical teaching was in its embryonic stage. There are those here who remember that time, and also the lengthening of the course to three, and finally to four, years. Clinical teaching I have seen extending until, together with obligatory laboratory work, it bids fair to assume the leading part in our instruction.

In that way we imitated but did not reach Europe. It takes some time to get so far. We were a young people, and where the plough was required to sustain our lives, the microscope, with its scrutiny of the almost invisible, had to wait. Our scientific institutions were not endowed and had to serve immediate practical ends. Laboratory workers could but rarely be paid for lack of funds. But now, and for some time past, well-to-do men go into medicine for love and not for money. They invest their own in their pathologic, biologic, histologic or chemic labors; and, as good citizens of the republic, are satisfied with the interest their investment will bear to the domain of science, in the service of humanity. Medicine, like politics, will be purer for the money put into it, instead of taken out of it.

In still another respect I have been most fortunate. While pediatrics has become the subject of special study, and while there are even those who restrict their practice to infants and children, there never was the tendency to set it up as one of the narrow specialties. In regard to them many changes have taken place. During my own early life I have seen a merito-

rious man whom I much admired—Horace Greene—persecuted and derided because he paid what was considered too much attention to the larynx, perhaps, also—who can tell?—because he knew more about it than all of the rest; and while getting older I had to observe, first in Europe, then with us, the tendency to exaggerated specialization, which has contributed much to narrow the scientific, mental and moral horizon of many a young man who means to become a wealthy and famous specialist without ever having been a physician. I know of no pediatricist with that turn of mind. To study and practice a specialty should not mean to cut loose from medicine. It is not in vain that the fourteen great national special organizations feel the good that is in the consolidation into a triennial congress.

In regard to our medical schools, it should be remembered that, with few exceptions, all were at one time, and most of them are still, private institutions. An intelligent American audience need not be told that vanity, avarice, territorial pride, professional jealousy, had a good deal to do with the mushroom growths. St. Louis and Chicago had at one time, and have, perhaps, to-day, thirty medical schools between them. That is why professors are as numerous as crab-apples and plain doctors are scarce—at least in large cities. I am certain I express the opinion of all here when I say that medical teaching will be better and more uniform, and more in accordance with the requirements of the public, when our 150 schools will have been reduced to twenty-five, and each of them will be connected with a university, as its medical department.

At the same time, in 1853, American medical literature was in its beginning. It is true that Drake had long before written his "Principal Diseases of the Valley of North America"—an immortal work. Holmes had proclaimed the contagiousness of puerperal fever many years before Semmelweis; but such great achievements were few. Original books were scarce. Some of our few journals were of the best. I mention the honest, scientific and conscientious *Journal of the Medical Sciences*, and the always noble and refined *Boston Medical and Surgical Journal*. There were in New

York the *Journal of Medicine*, which has since been transformed into the *New York Medical Journal*, and the prototype, alongside the *Boston Journal*, of our present weeklies, the *American Medical Times*. And now, in 1900! Your literature is as well known to you as to me.

Let me speak, therefore, only of our more than 300 medical journals. That some represent the finest flowers of intellectual research and keen observations—many more, however, the choicest rubbish accumulated by phenomenal ignorance and advertising impertinence—is simply a sad fact. Reduce them to forty; these forty will have a larger market, may be able to select their contributions and to pay the contributors, while at present they enrich the publishers only. The larger markets will enable professional men or corporations to follow and improve upon the example of the *Philadelphia Medical Journal*, and at least strike out for independent action and found an independent press, not relying for its sustenance on the advertisements of proprietary articles, whose principal element is the barbarism of their names, or on so-called original papers which bear the unwritten signature of nostrum manufacturers on every one of its bold and shameless pages. Gentlemen, it is time things should take a turn. There was a period when they asked, "Who reads an American book?" American books are now read the world over by privileged men, and even translators. Verily, verily, the time should come speedily when they will ask, "Where is the ignoramus that does not know American literature?"

Twenty years' exertion before the legislature on the part of the medical profession—not of the schools, some of which were opposed to the progressive movement—has at last resulted in the demand of a minimum of preliminary knowledge before matriculation, and, further, in a law, according to which the license to practice depends on the result of a State examination for citizens and foreigners, that is not controlled by the medical schools. The law, in its fear of improper influence, has even—incorrectly, I think—excluded from the Board of Examiners whomsoever is in any way connected with a teaching faculty. In all these successful endeavors of the rank and file of the profession, I lent my hand. If there

be any merit in my so doing, I claim it. For, though a college professor, I saw the mistake of the schools that combated the inevitable progress on account of alleged but misunderstood interests, and kept intact and sacred my allegiance to the great profession in which I started, and in which I hope I shall remain to my last hour. With another step in the evolution of medical teaching I have had much less to do than I could wish; for the growth of post-graduate schools has not only disseminated modern knowledge and methods amongst the established practitioners, but also started an impulse in the graduate schools to arrange for post-graduate courses.

Medical societies have grown in membership, numbers and influence. But latterly their number has grown so as to justify the suggestion that there is no blessing in the multiplicity of names, inasmuch as new societies have to recruit themselves either from the membership of older ones, or to look for candidates amongst the young men by more or less scrupulous canvassing. There is more strength in forceful consolidation than in fanciful expansion. Besides, it is a matter of sincere regret to many of us to note that the spirit of unfriendliness should not be buried forever, and that now and then personal vanities and grievances have the better of common sense and justice, and of the professional welfare. Many years ago one of the societies—the Orthopedic—gave up its separate existence to become a section of the Academy of Medicine; there are some others that would be more useful than they are even now by taking a similar step. Within the time I speak of that Academy took wondrous strides. I knew it in a small room in the University of Washington Square, in West Thirty-first street, and love it in its present palace, with ever increasing public medical library, second in importance in the country, its impartial, non-political interest and co-operation in all public sanitary questions, with its labors in matters of quarantine, cholera and watershed, with its generosity to members and non-members alike that is so recognized as to provoke callous abuse, and with its ten sections in constant working order. They have given the young men, during now more than a dozen years, the opportunity for legitimate competition, for obtaining a hearing and making their reputations.

Ask them, and they will tell you that their growing renown—next to themselves and their honest work—is due to the possibilities afforded them in the New York Academy of Medicine. May its shadow grow forever !

During a long life I have seen more. Hospitals were built or enlarged, dispensaries and similar places established to such an extent as to justify anxiety about, and the battle against, the abuse of medical charities. Personally, I have always seen—and still see—a great danger in tempting people to demand and take gratuitously services they can and should pay for. The gradual undermining of individual honesty and responsibility will prove a nail to the coffin in which republican institutions—founded, as they are, on equality, mutual obligations and probity—may some day be buried.

The impulse given by the profession has also resulted in the foundation of the Willard Parker Hospital, which should have been one of many, and of the Minturn Hospital, in the improvement of the factory laws referring to children ; in school inspection, which should be more comprehensive than they are; and in ridding the people of part of the quacks. How difficult that office is, and how serious the danger connected with it, in spite of the persistent and well-directed efforts of the New York County Medical Society, can be appreciated only by those who know the extent of quackery in all classes of the public, which for proprietary medicines alone pays \$200,000,000 annually, and the sympathy it meets even with the alleged spiritual heads of mankind. Says Herbert Spencer: "The incorporation of authorized practitioners had developed a trades-unionism spirit which leads to jealousy of the unincorporated practitioners—that is, the irregulars."

In the solitude of his study, and communing with himself, he did not learn the needs of the people and the necessity of protecting their health against their own ignorance and prejudice, and of offering them unadulterated and unselfish science and art, as you feel bound to furnish them pure water and food—sometimes, or often, against their will. There are but few of us that have a high opinion of the discernment and discretion of a large part of the public. For there is too much clairvoyance, Christian lack of science, medical sectari-

anism and medicine-chest quackery, and too much medical dilettanteism amongst our well-clad and well-fed, semi-instructed but uncultured and mentally unbalanced classes.

Meanwhile the professors—and I among them—have plodded on. Untold thousands have arisen this half-century of mine, or passed away. There were the wage-workers, the teachers, the pathfinders. There were those who fought disease or epidemics bravely and survived, or those who died in a single task and left their small children hungry. It is true the time has passed by when the doctor was killed when he lost a patient. That is different now; we are more civilized—we are satisfied with murdering his good name. There were—there are—only few that gained repute, local or national. If there were, it was not always to their advantage. Harvey and Gall, like many others that worked for science, lost their practice and livelihood; still, without them, there would have been no Bichat and no Virchow. The brave physician's work was always hard, for it is as difficult to save one life as it is easy to kill a thousand. That is why I cannot feel enthusiasm for the doctor who is occasionally puffed for leaving his humane work to participate in the killing, nor for the injustice of history that mentions a thousand generals to one physician. Some of what I have said may be objected to. But I know that the views I have expressed were mine always and are not engendered by advancing age.

What, after all, is age? The boundary line between the young and the old is not, I take it, in the bald head or the gray whiskers, but in the change of a man's ambitions, motives and purposes, and of his relations to the world and its ways and aims. It is true that I have been told even to-night that I am seventy, in the pleasant way you have of showing your condolence. I can bear it as long as those not so old as I am accused of being treat me as their equal and call me young—for an aged man.

Now, may I betray to my younger colleagues—I like to talk to them—how I succeeded in getting along with my age and with the young, and remain—as many say—one of them? By arranging a life program, I tried to learn from my books, my patients and my colleagues—sometimes even from midwives

and old women. Ambrose Pare admitted that he hated quacks only when they could teach him nothing. I think, also, I did my duty to my patients and my colleagues.

In accordance with my democratic schooling, I was fortunate enough to have respect for the individual. That is why I found it easy to imagine myself in the place of a patient, and to spare his feelings if I could not preserve his life. Where you cannot save, you can still comfort. I never told a patient he had to die of his illness, and hope I shall never be so careless or so indolent as to do so in the future. The magnetic needle of professional rectitude should, in spite of occasional deviations, always point in the direction of pity and humanity.

Another lesson I learned early was this: That my patient had to be treated, and not the name of his disease, and also, as my illustrious medico-poetical friend proclaimed in Washington a few days ago, "'Tis not the body, but the man, is sick."

My medical education dated from a dangerous era. Symptomatic diagnosis had been replaced by the anatomic. Rokitansky and Skoda cared more for the dead bodies than for the living convalescents; the former proclaimed loudly that the only thing scientific in medicine was the autopsy, and the Nihilism of Vienna was that time's modern therapy. You and the patient met only twice—first, when you made the diagnosis of his case; the second, his autopsy. Fortunately in F. Nasse I had fifty years ago a teacher of unadulterated humanity, combined with all the scientific eagerness of his mental youth of seventy years. From him, also—though he was not a democrat nor a revolutionist—I learned the sacredness of individual right and life which I never ceased to respect. Thus I learned two things: First, never to let up in my care of individual life when entrusted to me; secondly, that no single political or religious creed ever owns, or controls, or interferes with, the dictates of humanity and common sense. Man is above theories or creeds.

Further, my young friends, I never thought I owned my patients, and never grudged my colleagues their own. I never shrugged my shoulders when they were well spoken of, and did not believe that my reputation suffered when they were

eulogized. I always professed that patients should come to me rather than that I should run after them. When a patient left me for some other doctor I may have felt chagrined, but I did not blame the doctor he called in. When a doctor robbed me of a patient by hook or crook, or both—such things do happen, I believe, even now—I was sorry for the doctor and for the profession, and glad I was not he. To compete honestly I think is easy for a gentleman; to bear dishonest competition should be easy, but it worries. Not to take honest competition on the part of others kindly, shows disregard for the rights of others, either doctors or patients, and bad citizenship; or it proves premature old age, with all its occasional avidity and venomous jealousy. Now, the morbid bitterness of old age of which we hear, I have not experienced as yet; and if, or when, it will come with the increasing atherosclerosis of brain and arteries, I wish and trust somebody will tell me. There was a time—not so long ago—when I was the youngest everywhere. When I got bravely over that, I always kept in touch with the young, either students or colleagues or writers. Literature is always young—students and colleagues sometimes too much so. But they suited me exactly, for they kept me in touch both with my former self and the new era. Mainly in the last decade or two the young men were compelled to learn many new things which, though Leuwenhock two hundred years and Henle sixty years ago saw the holy land from afar, could not have been believed possible by a Sydenham, or Boerhave, or Haller, or even Bichat. We older men are either behind the time or we have to unlearn much of our dearly-bought stock, and to learn with the young men or from them. To the young amongst you all, particularly to my own accomplished assistants, both in private and official positions, I here express my thanks—not only for the direct instruction I have received from them, but for the imponderable intellectual and moral influence the intercourse between intelligent creatures must always exert.

Then there is another trick. When your anger rises with you over some unjust thing, be not afraid of showing the blush on your face; when an iniquity is perpetrated, resent it. Be not afraid of slapping the cheek that deserves it, in

private or in public. Personally, I hate enmities; they always fretted and worried me and gave me sleepless nights; but I never was afraid of the enemies I made as long as I fought the battle of professional or civil decency and dignity. If there be a bad, or a ludicrous, or a dangerous man, and if he feels offended at my telling him of his misdeeds and my trying to protect the profession or the community against him, here I plead guilty, and I shall do it again forevermore. When I shall stop, then call me old.

The facility of obtaining a diploma and the license to practice, formerly greater than now, has so filled the profession with undesirable men and women as to crowd the ideal as to what a physician ought to be to the wall. It is only with the growing difficulty of matriculation and increasing severity of examinations that the number of underweight doctors becomes smaller. With this increase, and with growing competition, the methods of obtaining a livelihood in every business and vocation become more doubtful. That is why the morals of the profession have been subjected to a most severe strain. Moreover, the commercialism which is the signature of the end of our century has invaded industries, arts, science and the professions, the medical profession more in Europe—as I could easily prove—than in America.

This superiority of the moral tone in our American profession is due to the innate pride of our citizens, and has certainly been commemorated or preserved by the teachings of the code of the American Medical Association. So settled is that habit of modesty and pride amongst us that when finally we resolved in the Medical Society of the State of New York that no law-book was required to guide our methods of intercourse, the observance of the rules valid amongst gentlemen became even stricter in the profession of the State of New York than ever before. Still there are those who are infected with the meretricious spirit of the times, and think they cannot wait for success. Indeed, no profession should expect to be exclusively composed of men of stern character and incorruptible probity. The methods of reaching their ends are therefore, as the case may be, those of vanity or obtrusiveness—now and then of dishonesty.

Those of us, however, who crave notoriety in the belief that the majority of the public have as little brains as fish that take every bait, will meet reporters at the bar or in the sacred concealments of their offices, get into the newspaper columns with their wonderful electrical discoveries, miraculous cases, unheard-of operations, and long titles, the least of which is at present "professor."

In the words of a great cynic, "What are you going to do about it?" There are those whose egotism and vanity are not controlled by any regard for the public good, and who are acrobatic experts in the art of keeping on the fence between honorable professional behavior and shameless quackery. If they knew how ludicrous they are, and how pitiful they appear in the eyes of the honest crowd about them, they would do better. And here is a word to the young. I am afraid we old men are past changing, but it is a failing in our national character to be always cordial, always courteous, always handshaking. We do not identify the sin and the sinner; we abhor the former and are too good-natured to shun the latter. If there be a danger to our morals and our politics, it is there. If you, the young men in the profession, will refuse approval and honors to men whose actions and methods you condemn; if you will only show them that your heart is chilled against them—some of them are in public positions—there will soon be an end to offenses which need not always result from wickedness, but bad taste only. There are those, indeed, amongst the vain who fear the display of bad taste more than the perpetration of sin.

After all, however, when I look backward I really do not believe that the moral tone of the profession is lower than circumstances will always necessitate in this period, when trade is everything. There were jealousy, strife and competition at all times, and men were always human. The "good old times" is an ideal that, while its consummation is too far ahead or beyond the horizon altogether, is searched for backward. Doctors were always what their time, their people and their surroundings made them.

The mutual relation of physician I have seen improving during my own time—that is, within half a century. Imag-

ine that twice that time, only one century ago, the literature on the behavior of physicians toward one another was very copious; evidently the need of it was great. At that time consultations between doctors were declared by a well known writer to be impossible, purposeless, time-killing and "revolting;" and as late as 1783 famous I. P. Frank advised seriously to call in the police to arbitrate and restore order when doctors disagreed in their consultations. That was only a century after the polite scoundrel of Moliere proposed to his colleagues: "Let me bleed him, and I let you purge him."

Not very long before my time the amenities of professional intercourse cannot have been very great, when Lisfranc called Dupuytren the butcher of the Hotel Dieu, and Dupuytren dubbed Lisfranc the "murderer of the Charite." One of the later publications on the mutual relations of doctors was that of Percival in 1807; it was made the law-book of the American Medical Association in 1847. My illustrious friend in Washington, Dr. S. C. Bussey, who upholds it as a necessity, still proclaims that the rule forbidding consultation with sectarian practitioners altogether should be so modified as to permit them in cases of emergency. That is what the Medical Society of the State of New York made its policy in 1882. It was a number of years afterwards that the code was abolished altogether. As far as I am personally concerned, I am still of the opinion expressed years ago—that there are no statistical data to prove that more sins are committed by gentlemen without than with a written code.

On the other hand, I cannot see why, whatever differences there are between those who adhere to the Code of Ethics, and those who believe in and act on the same principles, could not easily be adjusted. Books are made for the use of men by men; and no fires are lit any more in this country under the impression that differences of opinion can be killed like human bodies. The spirit does not burn like flesh. Why differences of opinion as to the indispensability of a written code should lead to animosity to such an extent as to preclude the possibility of a peaceful discussion, I have never been able to conceive.

What, indeed, does all the discord amount to? The whole

profession agrees about the inadvisability of consultations, in the very interest of the patient, with a certain class of medical men, in the average cases of illness. In emergency cases such consultations are permitted for reasons of humanity by both parties of the profession. One of them bases its action on the written Code of Ethics; the other deems a written code unnecessary for its guidance. It is my opinion that our successors will hardly believe we ever were serious men when they learn that the enlightened and public-spirited profession could go to war over differences of motives and methods when the end in view was the same.

Mr. Chairman, I have been, more than I deserve, praised as a physician, as a teacher, as a citizen. My own remarks referred mainly to the first—for I am proud of the profession to which I belong. Every individual professional man, if he be, as mostly, a good man, and the collective profession have always proved good and statesmanlike citizens. They do not, I grieve to say, take much personal part in the politics of the city or country, but whoever knows the exhausting life the medical man is leading cannot wonder that we are not often seen in the political arena. That is deplorable, and my word to the young is to lend a hand to this country of their birth, or of their adoption—for it is in America that many political, economic and social problems will have to be solved. In every other respect there is no man that gives more and gets less than the physician. And the profession at large?

There is no interest connected with the life and health of the community that was not fostered by the co-operating physicians. The Sanitary Commission of the Civil War contained illustrious names like Agnew and Krackowizer. Physicians know best or feel most intensely that a people stricken with poverty and ignorance, and decimated by preventable sickness, should be deemed an anachronism in this century, and that, as Virchow expresses it, every epidemic is a warning that should teach a statesman that there is a preventable or curable disorder in the organism of the commonwealth. Unfortunately it is too often true, what Anarcharsis said of Athens, that the wise men do the talking and the others the ruling. If that was not so, it would look impossible that a

quarter of a million, asked for once, in behalf of the establishment of what is to be at the same time a life-saving station and an instruction camp, should be refused, while a million a day is spent on destruction; or that an appropriation required for the solution of problems connected with the mental health and disease of tens of thousands of our fellows should be withheld. The battles against prejudice, shortsightedness and incompetence are always fought by the medical profession, which unfortunately, is too often not consulted, and that, gentlemen not of the medical profession within hearing of my voice, is what binds us together, and renders us proud of one another with that altruistic unselfishness which is our sacred egotism. To look back upon a long life spent in that profession is my greatest satisfaction, and to know that no changing influence of the day is able to divert the profession from its manifest destiny and plain duty of being and remaining the teacher and protector of the race in all that pertains to its physical and moral welfare, is a boon greater than endless millions or worldly power. That is why I am here, distinguished and honored more than I personally deserve, but understanding perfectly well that my brethren have come here with the sentiment of professional good-fellowship, and the lay friends to do honor to their greatest benefactors—namely, medical science and the American medical profession—in the person of one of its fellows.

What I have said, gentlemen, may look to many rather like an academic discourse than an after-dinner talk. It remains for me to thank you for your patience; remember, however, this happens only once in seventy years. I have to express my thanks for many more things. Consider my recollections of nearly half a century. I came here a foreigner, and never was made to feel that I was a foreigner. I emerged from a European state prison to breathe the pure air of a free country. My political and social ideals were not all fulfilled, it is true, for nothing is perfect that is human; that is why it was still necessary to be an abolitionist and a mugwump, with the perfect assurance—which I still hold—that some time or other the minority turns out to be the majority. I imported nothing but a williness to work hard and to be modest and

grateful. I joined a profession that owed me nothing and knew still less of me than I knew of the profession. The kind reception I met with surprised me, for I knew that a foreigner would not be so treated in the country I had escaped from. I had but little except the knowledge of my duties and responsibilities. With that small capital I was received and allowed to co-operate as an equal in whatever concerned the profession and its relations to the commonwealth, city or country. I repeat only what everybody knows; so I do not boast when I say that one by one almost every place of honor the profession had at its disposal had been mine. Of this day I must not speak, for I cannot do so without tears in my throat. Who is there that wondered that when, many years ago, the great honor in foreign country was offered me, it took me a single minute only to decline? * I was—I am—rooted in the American profession, that I have observed to evolve without governmental aid, out of its own might, to become equal to any on the globe. I was—I am—rooted in the country that was my ideal when I was young, my refuge when, alone and persecuted, I stole away, and always, clouds or no clouds, my sunny hope forevermore.

And this "Festschrift"! These last weeks I wondered many a time, and I do so now, that I should be the receiver of that honor. When, many years ago, heroes like Virchow, and then again Henschel, were to be held up for the admiration of the medical world, on both occasions I had the privilege of co-operating in the expression of the estimation in which they were held. This distinction is rare, even in the country of my birth. In our country I know of only two such dedicatory volumes—the "Wilder Quarterly-Century Book of 1893," dedicated to Prof. Burt Green Wilder of Cornell University—and the volume presented to Prof. W. H. Welch of Johns Hopkins, once a hospital assistant of mine, now one of my honored masters, yesterday evening. That the country which adopted me and gave me, a peer among peers, opportunities to work, should in true cosmopolitan spirit adopt this method, rare enough in Germany, of raising a man to the greatest pos-

* Dr. Jacobi was offered a professorship in the University of Berlin.

sible height of distinction and making him shine above all men—and this man I—is far, far beyond what was the culmination of my possible hopes. That men here and the world over should respect me to the last day of my life was the extent of my pardonable wishes. If nothing else, however, this book, the work of others, will carry my name to posterity. I accept it with the gratitude due for the immeasurably rich gift. Amongst its contributors I see the names of many old friends, and some whose faces I never saw—the names of men from all civilized countries, honored in the realm of medical literature, known to one another by their achievements, separated by seas and boundary lines, but working for the same ends in the service of science and of mankind. Aims, methods and persistency are common to the medical profession of all countries. On its flag is inscribed what should be the life rule of nations—Fraternity and solidarity.—*Boston Med. and Surg. Journal.*

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.—MEETING OF
MARCH 16, 1900

LENGTHENING OF THE TENDO ACHILLIS.

Dr. R. A. Hibbs presented five patients affected with talipes equino-varus, the result of infantile paralysis, on whom he had performed a new operation, as follows: The tendo-achillis having been exposed by a parallel incision $1\frac{1}{2}$ inches in length, made to its outer side, it was cut transversely within $\frac{1}{2}$ inch of its insertion, through two-thirds of its substance and with the turned knife it was then split upward a certain distance. A transverse cut was made from the opposite side through two-thirds of the substance of the tendon and the knife being turned the tendon was again split to

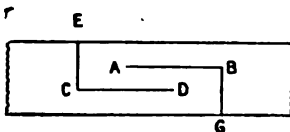


FIG. 1.

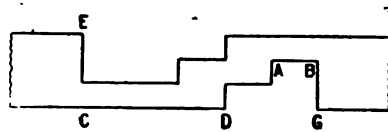


FIG. 2.

within $\frac{1}{4}$ inch of the first transverse incision. Thus the tendon was severed in such a manner as to secure its lengthening, and at the same time to preserve its continuity. In figure 1 the first transverse cut would be from E to C, the first longitudinal from C to D, the second transverse from G to B, and

the second longitudinal from B to A. When traction was applied lengthening would occur as shown in figure 2, and it would be equal to the sum of the two longitudinal cuts minus the sum of the two laps of $\frac{1}{4}$ inch each. In figure 1, if C D is $\frac{1}{2}$ inch, B A $\frac{1}{2}$ inch, A to E C $\frac{1}{4}$ inch, and D to G B $\frac{1}{4}$ inch, then the lengthening would be $\frac{1}{2}$ inch plus $\frac{1}{2}$ inch minus $\frac{1}{4}$ inch plus $\frac{1}{4}$ inch, or 1 inch minus $\frac{1}{2}$ inch, or $\frac{1}{2}$ inch. It was a matter of choice whether the longitudinal or the transverse cuts were made first, but it was important that the skin incision should be to the outer side of the tendon in order to prevent the scar from falling directly over the tendon which might be rubbed by the shoe. Dr. Hibbs had learned since operating by this method that it had been practised in a case of traumatic equinus by Sporon, a Dane (*Hospitalstidende*, 3rd series, Vol. IX, No. 50, 1891).

CASE I.—In a girl 8 years old, a short tendo-achillis had prevented flexion of the right foot within 10 degrees from a right angle. It was lengthened by this method on Sept. 22, 1899, and the foot was fixed at a right angle. In two weeks slight voluntary motion was allowed and the muscle received daily exercise with some resistance from the attendant. After $\frac{1}{2}$ inch lengthening had been secured there was positive resistance to any further flexion of the foot than was allowed by the lengthening. The child walked with strong control of the os calcis.

CASE II.—In a girl 12 years old flexion of the left foot was impossible within fifteen degrees from a right angle. The tendon was lengthened $\frac{3}{4}$ inch on July 6, 1899. With suitable after-treatment the result was an excellent position of the foot with strange action of the muscles of the calf.

CASE III.—In a girl 14 years old flexion of the right foot was prevented within ten degrees from a right angle. The tendon was lengthened $1\frac{1}{4}$ inches on June 16, 1899, an unusual amount in order to relieve extreme valgus, with resulting good control of the os calcis. As the valgus was recurring a tendon grafting would be done.

CASE IV.—In a girl 8 years old the left foot was inflexible within forty-five degrees from a right angle, appearing to be almost in a straight line with the leg. The tendon was

lengthened $1\frac{3}{4}$ inches on June 16, 1899, and the foot fixed at a right angle. It was believed that an ordinary tenotomy would have been followed by loss of usefulness of the calf muscles. It was seen, however, that this action was excellent.

CASE V.—In a girl 14 years old the right foot had been inflexible within fifteen degrees from the right angle and the tendon was lengthened $\frac{3}{4}$ inch on June 16, 1889, and the foot fixed at ninety degrees. The muscle and tendon showed enough strength to sustain the weight of the body on tip-toe, and this had been true of all cases presented. In no case had an effort been made to correct the equinus beyond a right angle. Further correction might be desirable in congenital, but not in acquired equinus.

That the strength of a tendon lengthened in this way was not seriously impaired was proved by the observation that in every case there had been resistance to the carrying of the flexion beyond the limit allowed by the operation, and also by the ability of the muscle and tendon to sustain the body on tip-toe. The process of repair had been rapidly completed after operation by this method, which presented obvious advantages over those in which sutures were applied to the tendon. But the greatest advantage had been found in the readiness and certainty with which the desired amount of lengthening could be exactly secured.

A perfect gait required the "spring" or elastic quality imparted by the muscles, which enabled the anterior part of the foot to sustain the body in walking. Without this power the gait would be that of one who had a wooden foot or a foot affected with talipes calcaneus. In equinus following infantile paralysis it was probable that the muscles were more shortened than the tendon, and, as lengthening the muscle was generally impossible, possible relief had to be sought by lengthening the tendon. In operating, however, it was important on the one hand to avoid leaving the tendon so long as to impair the action of the muscle, and on the other hand to avoid leaving it so short that the equinus would not be sufficiently overcome. This method enabled the operator to maintain exactly the proper relation between the length of

the tendon and that of the muscle. By subcutaneous tenotomy the equinus was corrected, but in many cases the result was a serious defect in the gait from undue lengthening of the tendon and resulting shortening and inefficiency of the muscle.

DR. A. M. PHELPS said that it was immaterial whether a muscle was operating at its full length or whether the same amount of muscle tissue was overacting at a shorter leverage. The power was precisely the same, as instances by putting your arm nearly straight or flexing it. So long as the amount of muscle cells remained the power was the same. Open incisions for primary operations on the tendons should be avoided, and in the ordinary subcutaneous operation the tendo-achillis should be made too long if possible by over-correcting, the normal process of repair being relied on to fill in the space between the ends and to secure an accurate and efficient adjustment of the relative lengths of the structures. He had repeatedly seen four inches replaced after division of the tendo-achillis and perfect function of the muscle restored.

Dr. Hibbs said that an alteration in the relative length of the muscle and its tendon modified the effect of muscular contraction. If the tendo achillis was lengthened the contractile power of the muscle cells might remain, but the extent to which the os calcis could be raised by the contraction of the muscle would be lessened. If the muscles of the calf could not momentarily sustain the weight of the body on tip-toe in the act of walking they were of great use.

Dr. H. L. Taylor said the fear of impairment of function after ordinary tenotomy properly done and followed up was unnecessary. It was formerly the custom after division of the tendon to put the foot up in the deformed position and to correct the deformity at subsequent sittings. Correcting the deformity immediately after the operation was attended with good results. It was possible to elongate the tendon too much, but such cases were rare. He had been looking for years for a case of ununited tendon after tenotomy, but had not found one. The exact amount of correction would vary with the kind of case. It was a matter of judgment. The results in the patients shown were admirable.

DR. H. G. Gibney said that he had seen one or two adults in whom the tendons had failed to unite. He could see no advantage in the new operation over the subcutaneous method after which many cases acquired a length of $2\frac{1}{2}$ inches. The results shown, however, were excellent, and would be better still after tenderness and an indisposition to voluntary motion had worn off.

Dr. J. P. Fiske said that the results shown were good, and that the details of the new operation were very interesting. It was, however, a departure from the rule of simplicity which characterized the old operation which, almost without exception, gave results which left nothing to be desired.

DR. A. B. Judson admired the mechanical ingenuity displayed in the operation. A short tendo-achillis produced no deformity and did not interfere with the normal gait excepting in cases in which the tendon was extremely short. Normal flexion of the ankle might be said to be about forty degrees within a right angle but with ten degrees the gait was normal in appearance and ability, and the patient experienced no inconvenience, even when assuming the unusual position of squatting. In measuring the equinus it was desirable to have the leg flexed on the thigh in order to relax the gastrocnemii which had their origin in the femur; The foot being held flexed manually, so far as it could be done painlessly, one arm of the goniometer might be made parallel with the crest of the tibia and the other parallel with the inferior surfaces of the os calcis and the head of the first metatarsal bone. The degrees could then be read on the scale. In the use of the club-foot brace for congenital equino-varus setting the upright backward from a right angle lengthened the tendo-achillis, which was contrary to what might have been expected. The object of setting it backward was to increase the leverage applied for the reduction of the varus. Lengthening of the tendon followed this adjustment in every case.

Dr. Taylor had a few years ago offered an explanation of this action of the club-foot brace by the theory that, as the inner border of the tendo-achillis was shorter than the outer border, when the foot was rotated outward by the brace the inner border was first put on the stretch and gave way, thus unexpectedly lengthening the whole tendon.

Dr. Hibbs said that he had operated in this manner on upwards of twenty patients, but those presented had been the only ones in whom sufficient time had elapsed to make the presentation useful. It was vastly more important to preserve the action of the muscles than to relieve the deformity which was generally not serious and in some cases absent.

EYE COMPLICATIONS IN TYPHOID FEVER.

Various complications of typhoid fever are noted by Hubbell. The most common are conjunctivitis, both catarrhal and herpetic, and inflammations and ulcerations of the cornea. Retinal hemorrhages seem to be next in frequency. A great variety of other diseases are observed, involving the deeper as well as superficial structures of the eye. These complications seldom develop until the later stages of typhoid fever. Some of them are post febrile in their manifestations, particularly ocular palsies and optic nerve atrophy. While typhoid fever germs may at times be the active agents in the production of the disease, it is probable that their toxins play the most important role. The virulence of these toxic agents is proportionate to the enfeeblement of circulation and to the diminution of tissue resistance.—*Medical Standard.*

Extracts from Home and Foreign Journals.

SURGICAL.

THE RIDING FRAGMENT.

C. H. Golding-Bird (*Brit. Med. Jour.*, April 21, 1900) says that in fracture of the leg with riding fragment, the obstacle to reduction is not so much blood clot, soft tissues, etc., between the tibial fragments, as it is the spring action of the fibular fragments, which are driven into the surrounding fibrous tissues. Attempts to reduce the tibial deformity increase the spring of the fibular, this being more especially true in cases of spiral tibial fracture. When proper manipulation fails to keep such a fracture in good position, when the fracture threatens to become compound, when there is shortening, operation should be performed not only on the tibial fracture, but also on the fibula, to prevent its spring action, and the fragments fixed according to the preference of the surgeon.—*Medical News.*

A WONDERFUL TRIUMPH IN SURGERY.

According to *Lloyd's Weekly Journal*, London, a remarkable feat in surgery has just been achieved by Dr. Hermann von Schrotter in the clinical department of the University of Vienna. A boy, aged 12 years, had swallowed a piece of lead of the size of a half-sovereign, which, passing through the trachea, descended into a bronchus of the second order. Dr. Schrotter extracted this piece of lead without tracheotomy and even without using anesthetics; the operation was, never-

theless, quite painless. This, it appears, is the first time that a bronchus of the second order has been penetrated and a foreign body extracted from it without a surgical operation. The extraction was effected under the guidance of Dr. Schrotter's eyes. First, by means of the Roentgen rays, the piece of lead was located at the height of the fourth rib; then Kilian's (Berlin) bronchoscope was in the ordinary way introduced into the trachea and electrically lighted up, and the piece of lead was at last extracted by a pincette expressly constructed for the purpose. Prof. Kilian has succeeded only once in introducing his bronchoscope into a bronchus of the first order, and then only by performing tracheotomy.—*Medical Record*.

SHELL MEMBRANE FROM EGG FOR TRANSPLANTATION.

W. Schiller (*Monatsch. f. Unfallh.*, v 6, No. 9) recommends in such cases in which neither Reverdin's nor Thiersch's method of skin grafting are available, the use of shell-membrane taken from a fresh hen's egg. This membrane contains epithelial elements which lend themselves most readily to the epithelializing of wounds, and should be applied, albuminous surface down, on the previously cleansed and sponged granulating surface.—*Medical Age*.

ICED CHLOROFORM

Iced chloroform has been used as an anesthetic in Prof. Schorburg's clinic in the Julius Hospital at Wuerzburg in over 14,000 cases without a single unpleasant result. The advantages claimed for this preparation of chloroform are the quickness of its action, its comparative freedom from danger, and the absence of the nausea and depression so common with other anesthetics.—*Medical Times*.

A NEW LOCAL ANESTHETIC.

Dr. G. Frank Lydson of Chicago, in the *Medical Record*, describes his method of using antipyrin as a local anesthetic. He has used it in a number of cases of urethrotomy. He uses a 10 per cent. solution, which appears to be quite as efficacious as cocaine. The solution should be fresh, and should be allowed to remain in the urethra for ten minutes. He suggests the antipyrin solution for nose and throat work in con-

junction with cocaine. It is anesthetic and styptic, and—unlike cocaine—is not followed by vascular relaxation. He sums up the advantages of antipyrin as compared with cocaine as follows: (1) Absolute safety; (2) freedom from constitutional effects; (3) distinct lessening of hemorrhage after operation; and (4) less damage to nutrition of the wounded tissue.—*Carolina Medical Journal*.

CARDINAL SIGN OF COLLES' FRACTURE.

M. W. Ware (*Med. Record*, March 31, 1900) says that in 300 cases of Colles' fracture the much talked-of silver-fork deformity was present in less than 10 per cent of cases, and its absence is therefore of little diagnostic significance. A better ground of diagnosis depends on certain fixed anatomical relations. The styloid of the radius is always at a lower level than the ulnar styloid. In 95 per cent. of Colles' fractures there is impaction, and as a necessary result the radius is shortened and the radial styloid rises to or above the level of the ulnar styloid. This sign is so constantly present as to be the cardinal pathognomic sign of Colles' fracture, and gives one a reliable guide for complete reduction. This diagnostic point is mentioned by few and emphasized by none of the works on fractures.—*Medical News*.

MEDICAL.

CANCER OF STOMACH IN THE YOUNG.

Cancers appearing in cases under 20 years of age are clinical and pathological curiosities, but those which occur between 20 and 30, although not at all common and may be considered as present in the young, yet they form a rather constant percentage, ranging from 2 to 4 per cent. W. Osler and F. McCrae (*N. Y. Med. Jour.*, April 21, 1900) have reviewed the cases which have been reported under 20 years of age, there being six below 10 years and only thirteen cases between 10 and 20 years of age. In a series of 150 consecutive cases of carcinoma of the stomach occurring in Johns Hopkins Hos-

pital, six of the patients were under 30 years of age, and these are reported in detail. Two features stand out prominently—a striking abruptness and the acuteness of the course. All cases were in males. Loss of appetite was not present in three of the six. Only one was free from pain, and vomiting was present in five of the cases, as was also a definite tumor. Mathieu, in his series of nineteen, estimates a mean duration of three months. In the reported series of six the duration was known in four, two being six months and two being four months. One other was probably equally as rapid, while the sixth gave a history of eighteen months — *Medical News*.

DIABETES WITH LOW SPECIFIC GRAVITY.

Dr. James B. Herrick of Chicago, at the fifteenth annual meeting of the Association of American Physicians, held in Washington, D C., May 1-3, read an account of some cases of diabetes with a very low specific gravity despite the presence of sugar in the urine. Usually there is a ratio between the amount of sugar in the urine, the quantity of urine passed and its specific gravity, so that the severity of the mellituria may be estimated from the other factors, but this is not an invariable rule. Eichhorst has had a case of glycosuria with urinary specific gravity of 1008. Naunyn has seen cases with specific gravities from 1010 to 1015. As low as 1003 has been reported. These low specific gravities occur not only in the polyuria, but also at the height of the glycosuria. Various reasons are given. Low specific gravity occurs in weak patients, especially if they are taking large quantities of water. In one of Dr. Herrick's cases the patient was taking large daily amounts of a mineral water supposed to be curative for diabetes. His urinary specific gravity never reached 1020. In a case of obese diabetes in Dr. Herrick's practice the specific gravity was but 1004. To be sure there was no error it was tested by several urinometers. The patient had been drinking beer excessively just before passing twenty four ounces of urine, and to this was due the low specific gravity. Cases of diabetes complicated by interstitial nephritis are especially apt to have low specific gravity of their urine. It is not enough, then, to look for sugar in

the urine only when the specific gravity is above 1020. If interstitial nephritis is suspected or the patient is weak, or takes liquids very plentifully, the urine should be carefully tested for sugar, no matter how low the specific gravity.—*Medical News*.

SOME POINTS IN THE THERAPEUTICS OF HEART DISEASE.

W. H. Thompson (*Medical Record*, March 17, 1900) says that in the treatment of all chronic heart diseases every organ of the body which has to do with nutrition must be called upon to do its share to help the laboring heart, and if any of them are out of order they must be set to rights. The writer says that physicians should not forget that all nervine medicines, such as digitalis, strophanthus, nitroglycerine, strychnine, caffeine, sparteine, and the rest, can never be other than temporary makeshifts. All that they can do is to relieve symptoms, and that only for a while. Permanent improvement is to come from other agents and measures which restore nutrition rather than stimulate function. One of these, which the writer holds to be of paramount importance, is fresh air. Fresh air should be systematically and continuously provided without effort on the part of the patient with failing heart. Then the great train of serious symptoms will finally vanish, and that not temporarily, as is too often the case with drugs. The writer says he never fails to administer iron and keep it up continuously in chronic heart disease. The bichloride of mercury, given in doses of 1-24 grain three times a day for a week has long proven efficacious in the treatment of chronic endarteritis. The writer has also prescribed five grains of iodide of sodium three times a day for weeks and months in chronic enlargement of the heart accompanied by arterial disease.—*Medical Age*.

TYPHOID WITHOUT INTESTINAL LESIONS.

Picchi has collected the records of twenty cases of typhoid infection without any internal lesion (post-mortem). To these he has added two cases of his own. A critical examination of the reported cases leads the author to reject some, as the evidence of freedom from intestinal lesion of a typhoid character was not decisive; but in fourteen of the twenty-

three cases the evidence was decisive in favor of the existence of a typhoid infection without intestinal lesion. These cases probably "do better" than the ordinary typical case, for they escape the group of dangers due to intestinal ulceration. Even in these non-intestinal cases it is probable that infection takes place through the intestine, even though there are no manifest lesions to be found. The two cases reported in detail occurred in two sisters who came from a house where typhoid was prevalent. One died from broncho-pneumonia and gangrene of the lung, and the other from pulmonary embolism. In each case there was strong bacteriological evidence of typhoid, but the intestines were normal and showed no sign of typhoid infection — *British Medical Journal*

MORPHINISM AMONG PHYSICIANS

The editor of *The Quarterly Journal of Inebriety* returns to this question in a brief note in a recent issue of that journal, quoting the traveling agent of a large drug house, as follows: "Within ten years my orders from physicians for morphine have rapidly increased. I have a number of regular customers who order from two to five thousand one fourth-grain and one-half-grain tablets of morphine for hypodermic use every month. Some of these physicians buy for their patients, others clearly use morphine themselves. Many of these doctors have a large practice, and are known to be morphine-takers. Other physicians buy very largely of deodorized tincture of opium and opium pills. In a small village of five thousand, where seven doctors practise, one physician bought over five gallons of tincture of opium every year. In another town where the practice was limited, large quantities of opium pills and preparations of codeine were sold to two physicians. Other narcotics, such as chloral hydrate, hyoscyamine, and cannabis indica, are called for in large quantities beyond the natural demand of practice."—*Med. Record*

DIAGNOSIS OF PERNICIOUS ANEMIA.

A. Abrams (*Med Rec*, April 28, 1900) reports two cases in which the diagnosis was difficult by clinical signs on account of the prominence of stomach signs. In both cases

there was a marked progressive anemia and emancipation with gastric irritability. In one case vomiting was almost a daily occurrence and an examination of the vomitus invariably demonstrated the absence of hydrochloric acid and the presence of lactic acid. In the other, test-meals gave the same results. There was considerable tenderness and resistance in the epigastric region and in one patient a ventricular dilatation was made out. An examination, however, of the blood made the diagnosis of pernicious anemia, both normoblasts and megaloblasts being present. The leucocytes were reduced from one-third to one-half the normal number, and the author believes this to be an important sign. He quotes Cabot as saying that "malignant disease may bring down the blood-count to 1,000,000 or lower, but in such cases leucocytosis is always present." Both of these cases were treated with Fowler's solution and bone-marrow, but the latter was discontinued on account of its irritant effect on the stomach. Fowler's solution was increased to twenty minims three times per day and both patients improved markedly. When arsenic cannot be given by the stomach it may be administered subcutaneously or even by the rectum. Iron is useless and liable to create digestive disturbances. Relapses are best prevented by minute attention to dietetic and hygienic details.—*Med. News.*

TREATMENT OF HAY-FEVER BY SUPRARENAL GLAND

The most constant clinical lesion of hay-fever is a nasal vasomotor paralysis with an accompanying congestion and edema, producing characteristic symptoms which are, however, never more than those of an acute inflammation of the respiratory mucus membrane. The accompanying local lesion and psychological factor which are supposed to complete the chain may be wanting. B. Douglas (*N. Y. Med. Jour.*, May 12, 1900) points out the peculiar antagonism which the action of suprarenal gland bears to the clinical symptoms of hay-fever and reviews the limited literature upon the subject. After considerable experience with the drug he believes that no other remedy has such prompt and decided action. It may be given either internally or locally with the same result, and

has the enormous advantage over the ordinary remedies in leaving no after-effect. When used for a long time, both locally and internally, it may cause such a constant diminution in the nutrition of the parts that atrophy may result. Its best result is achieved in the simple cases in which the principal symptoms are those of a nasal and pharyngeal inflammation. The asthmatic tendency may be diminished, but where the asthma has already developed the drug seems to have very little effect. A combination of internal and local treatment seems to be the best. A solution of 6 or 12 per cent. is made by shaking up the saccharated dried extract with water, and decanting after one hour. This may be applied by spray every two hours until the symptoms are controlled. Internally, 5-grain tablets may be administered every two hours at first, day and night, until giddiness or palpitation is observed, or until the vasomotor paralysis is controlled. The dose may then be given at gradually-increasing intervals. The author believes the drug to be almost a specific, but recommends the use also of other recognized adjuvants, such as digitalis, quinine, cocaine, and Clark's solution.—*Medical News*.

VENOUS THROMBOSIS AS A COMPLICATION OF CARDIAC
DISEASE.

At the meeting of the Association of American Physicians in Washington, D C, May 1-3, 1900, Dr. William H. Welch of Baltimore read a paper under the above title. His remarks in part were these: Distinct venous thrombosis is not usually recognized as a complication of cardiac disease. He recorded four personal observations. In the first the patient was a woman, aged 18 years. She had aortic and mitral insufficiency. During the course of the disease hard edema of the left arm developed, and at autopsy adherent pericardium was noted, and thrombosis of the innominate, the internal jugular, the external jugular, the subclavian, and the axillary veins of the left side. The oldest part of the thrombosis was in the lower part of the internal jugular vein and in the innominate vein. Cultures from the body of this patient were sterile, except those made from the lung and the thrombus; these gave the streptococcus pyogenes. The second

case was in the person of a woman, aged 35, who was suffering from mitral stenosis. The left side of the neck became swollen in the line of the internal and external jugular veins; later the left arm also became swollen, and a thrombosed axillary vein could be felt. The collateral circulation was established and the symptoms disappeared. Later the patient had an embolus lodge in the popliteal artery, from which she also recovered.

The third case was that of a boy, aged 16 years, who had mitral and aortic insufficiency. The left arm became markedly edematous, and worse than the right, which was also swollen. The left axillary vein was thrombosed, as well as the lower part of the internal jugular vein. The boy died, but there was no autopsy.

In the fourth case the patient was a man, aged 78 years. He had mitral insufficiency, with thrombosis of the left femoral vein, and recovered.

Dr. Welch has collected from the literature twenty three additional cases. The location of the thrombus was in the veins of the neck and the upper extremities in the majority of instances. In twenty-three cases in which the thrombus affected the veins of the upper part of the body, seventeen were in females, four were in males, in two the sex was not stated. The heart condition in twenty cases was a complication of mitral disease, and, since this form of heart disease is more common in females than in males, the preponderance of female patients in whom this complication occurred may be explained. The age at which the majority of cases occurred was between 15 and 30. Rheumatism, while the underlying cause of the heart disease, was probably not the cause of the thrombosis. In the majority of cases the thrombosis appeared during the failure of compensation. The veins of the left side were affected in twenty one out of twenty-three cases. Usually the veins of both the neck and the arm were thrombosed.

The case reported by the author is the only one in which micro-organisms were found. In one case, reported by Dr. Helen Baldwin, the mouth temperature was seven degrees lower than the rectal temperature. The prognosis is grave,

mainly on account of the gravity of the cardiac condition. The more frequent occurrence of the thrombus in the left side may be explained by the anatomic condition of the veins, blood coming into a common receptacle from various angles, valves in the jugular veins that are frequently deficient, and the regurgitation of the blood into the great veins causing the whirling motion that causes clotting. The thrombus is probably of micro-organismal origin —*Boston Medical and Surgical Journal*.

CARCINOMA AT SIXTEEN.

J. H. Abram (*Jour. Path. and Bacteriol.*, February, 1900) reports a case of primary carcinoma involving the glomeruli of the kidney in a boy 16 years of age. This condition he regards as almost unique, there being but two cases on record resembling the author's. The character of the cells was such as to make him regard the tumor as having originated in the glomeruli and possibly associated with a persistence of the epithelium of the primitive renal tubule, thus supporting the Cohnheim embryonal origin of such new growth.—*Med- News*.

OBSTETRICAL.

THE TREATMENT OF A SIMPLE CASE OF NAUSEA AND VOMIT- ING IN PREGNANCY—CARE OF THE BREASTS AFTER MISCARRIAGE.

A kind of muslin should be accurately applied to the body in order to support the breasts. This should be kept in place by straps passing over the shoulders and crossed behind if necessary. The binder should be applied in such a way and of sufficient tightness to gently compress the breasts and bring them as near as possible to the middle line. Over each nipple is placed a bit of sterile lint and each breast is covered by a pad of sterile gauze before the binder is applied. In many cases this is all that will be necessary. In other instances, where the breasts become congested with milk, gentle massage

or pressure of the ducts from the periphery to the nipple and the application of the breast pump at times may be necessary. this can be done without giving the patient much pain, but should not be resorted to unless the accumulation of milk is of considerable quantity.

In a small proportion of cases the application of an ice-bag or coil is advisable. Great care should be taken that this application is made perfectly dry. The principal points in managing these cases are the proper application of the bandage and the keeping of the nipples perfectly sterile. The great majority of cases will do well with this simple management, a certain proportion will need the judicious application of the breast pump, and yet a smaller number may require the ice bag in addition to the other measures —*Dr. E. P. Davis, N. Y. Med. Jour.*

RUPTURE OF THE PREGNANT UTERUS.

Alexander Docktor reports the case of a woman. 30 years old, who was brought to the hospital in a state of partial collapse. She had passed through a normal pregnancy and had been in labor for a while, but the pains suddenly ceased after about twenty hours, and the patient's condition became very grave. A diagnosis of rupture of the uterus was made. Caesarean section was performed, and the patient made a good recovery. The fetus was a male, weighing nine pounds five ounces, with a large head (15½ inches in circumference), the bones of which were in great part ossified, and the sutures and fontanelles were narrow, —*Der Fraunarzt*, March 16, 1900

A REMARKABLE CASE OF "SUPERFETATION."

Dr. John P. Nicholson (*Medical Brief*, April) states that on the evening of Feb 21, 1900, he was called to see Mrs. J., aged 44, multipara. the mother of nine children, and found her suffering greatly with severe pains in the pelvic region, in nowise expulsive. It was plain that labor would soon set in. Examination revealed an abnormal state of affairs. The os was partly dilated, the waters had escaped, and Dr. Nicholson feared he had to deal with a cross presentation. After several hours true labor pains came on, and with some difficulty he

removed a fetus, apparently three months old. It was seemingly healthy, not at all offensive. This occurred about 3 A.M., Feb. 22. At 11 A.M., after an entire normal labor, his patient gave birth to a well-developed living child weighing eleven pounds.

There was one large and a separate small placenta. Superfetation, or the possibility of impregnating a female already pregnant (except at a very early period) is generally denied. In this instance we have an apparent impregnation after six months. During an experience of forty years the author has not encountered or known of a similar case.—*N. Y. Medical Journal.*

Editorials, Reviews, Etc.

PUBLISHER'S NOTICE.—The JOURNAL is published in monthly numbers of *Forty-eight* pages, at one dollar a year, to be always paid in advance.

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All communications for the JOURNAL, Books for review, exchanges, etc., should be addressed to the EDITOR.

FOREIGN PRODUCTS.

We have grown so accustomed to seeing the mark "made in Germany" on articles, especially medical and surgical articles, that it no longer excites our wonder.

That foreign countries can, in spite of heavy taxation, compete successfully, does not speak well for American enterprise. It shows, however, what immense amounts of money change hands in dealing in proprietary medicines. While we do not altogether approve of proprietary preparations, there are many worthy articles put on the market which could not be had otherwise, and the welfare of our large manufacturing chemists should be of special interest to the profession, as we must look to them for purer and more reliable drugs, and therefore it is to the interest of the profession to give them every assistance possible for their protection.

Of course this should not apply to secret nostrums, panaceas, etc., which class should be continually condemned and are condemned by the better class of physicians.

It is rumored that certain foreign houses will make an effort to control the Section on Materia Medica at the coming meeting of the Medical Association to be held in Atlantic City. If there is any truth in the report, it is an insult to the Association, and we hope the delegates thereto will not fail to see and resent it as such.

That such an audacious thing could be true is almost beyond our belief; but when we reflect upon the iniquities of man—especially when he is chasing the Almighty Dollar—we should not be surprised at anything, for the majority seem to have no conscience provided they succeed, for nothing succeeds like success. The profession have not forgotten the efforts of certain foreign parties who sought to secure patents on Behring's anti-diphtheritic serum.

We trust that those of our readers who attend the meeting of the American Medical Association at Atlantic City will bear in mind the fact that rumors as above mentioned are in existence, and that they will use their influence to prevent any such consummation if the reports be true.

MEDICAL SOCIETY STATE OF TENNESSEE.

The Sixty Seventh annual meeting of the Medical Society of the State of Tennessee was held at Knoxville, April 10, 11 and 12. The meeting was well attended, and proved a most enjoyable and profitable meeting. The following officers were elected for the ensuing year:

President—Dr. J. A. Crook, Jackson.

Vice-President for West Tennessee—Dr. Richmond McKinney, Memphis.

Vice-President for Middle Tennessee—Dr. R. E. Fort, Nashville.

Treasurer—Dr. W. C. Bilbro, Murfreesboro.

OBITUARY—DR LONDON CARTER GRAY.

Died at his home in New York city, May 8, after a protracted illness. He was born in that city April 3, 1850; but was a direct descendant of old King Carter, proprietor of the famous colonial estates of Westover and Shirley, in Tidewater Virginia. He graduated in medicine from Bellvue Hospital Medical College, 1873, and became Assistant to the late distinguished Surgeon, Dr. James R. Wood, of New York city. Directing his attention to Neurology, he was made Professor of Nervous and Mental Diseases in the Long Island College Hospital, Brooklyn. He afterwards was one of the founders of the New York Polyclinic, and filled the chair of Nervous and Mental Diseases in that institution. He filled many places of distinction in the profession—such as Chairman of the Executive Committee of the Congress of American Physicians and Surgeons, President of the New York County Medical Society, President of the American Neurological Association and the Society of Medical Jurisprudence. Columbia University conferred on him the honorary degree of Master of Arts. He was the author of a standard work on *Mental and Nervous Diseases*, which is a favorite with the profession, and a text-book in some of the medical colleges. In person, he was a genial, warm hearted man—always ready to help those of his profession in need of advice.—*Va. Semi-Monthly Med. Jour.*

BOOK NOTICES.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE. By ROBERT W. TAYLOR, A.M., M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia University), New York; Surgeon to Bellevue Hospital, and Consulting Surgeon to the City (Charity) Hospital, New York. Second Edition, thoroughly revised. With 91 Illustrations and 13 Plates in Colors and Monochrome. LEA BROTHERS & CO., New York and Philadelphia, 1900.

The second edition of this excellent text-book is in hand, and we are assured from the cursory examination we have given it that it has been greatly improved by a thorough revision and enlargement, although in its first edition it seemed to possess all the points necessary to a standard text-book. It deals with a very troublesome class of diseases—troublesome both to the patient and the practitioner. As a help to the latter in the management of the disorders of which it treats it has no equal, and we take great pleasure in recommending it.

CHEMISTRY AND PHYSICS. A Manual for Students and Practitioners. By WALTON MARTIN, Ph.B., M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, New York; Member of Association of American Anatomists; and WILLIAM H. ROCKWELL, Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, New York; Member of Association of American Anatomists. Series edited by BERN B. GALLAUDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon Bellevue Hospital, New York. Illustrated with 137 Engravings. LEA BROS. & CO., Philadelphia and New York.

This is a valuable volume of a very useful series of pocket manuals for the use of students. The book is built on practi-

cal lines, and is intended to present, not an exhaustive treatise upon either chemistry or physics, but such parts of those sciences as are of use and value to the student. The work has been carefully written with that end in view, and is certain to prove of material aid to the student class and to practitioners who desire to look up forgotten points.

ESSENTIALS OF DIAGNOSIS (Saunders' Question Compenda, No. 17) Arranged in the form of Questions and Answers. Prepared Especially for Students of Medicine. By SOLOMON SOLIS-COHEN, M.D., Professor of Clinical Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine in Jefferson Medical College; Physician to the Philadelphia Hospital, and to the Rush Hospital for Consumptives, etc.; and AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital, etc. Illustrated. Second Edition, revised and enlarged. W. B. SAUNDERS, 925 Walnut street, Philadelphia, 1900.

The usefulness of this series of students' self-helps is attested by the enormous sale of copies—over 175,000 having been sold, according to the publishers. This volume has been greatly enlarged and thoroughly revised. It is arranged for the use of students in the form of questions and answers—a system which undoubtedly helps the student in his laborious studies. It is an excellent number of the series.

A MANUAL OF OPERATIVE SURGERY. By LEWIS A. STIMSON, B.A., M.D., Surgeon to the New York and Hudson-Street Hospitals; Consulting Surgeon to Bellevue, St. John's, and Christ's Hospitals; Professor of Surgery in Cornell University; Corresponding Member of the Societe de Chirurgie, Paris; and JOHN ROGERS, Jr., B.A., M.D., Surgeon of Gouverneur Hospital, New York; Instructor of Surgery in Cornell University. Fourth and Revised Edition, with 293 Illustrations. L&A BROS. & Co., Philadelphia, 1900.

This, the fourth, edition of a favorite text-book, will be warmly welcomed by the profession. It is condensed and yet exhaustive—in fact, this edition has been considerably reduced in size by the omission of a part of the text and a number of cuts which, as the author says, seem to have “outlived their usefulness.” A book like this is of exceptional value as a work of reference, as the text is concise, clear and comprehensive, and the illustrations numerous and excellent.

THE PATHOLOGY AND SURGICAL TREATMENT OF TUMORS. By N. SENN, M.D., PH.D., LL.D., Professor of Surgery, Rush Medical College, in Affiliation with the University of Chicago, Chicago Polyclinic; Attending Surgeon to Presbyterian Hospital; Surgeon-in-Chief, St. Joseph's Hospital, Chicago. Second Edition, Revised. Illustrated by Engravings, and 12 full-page plates in colors, Philadelphia: W. B. SAUNDERS, 925 Walnut street.

Dr. Senn's report on tumors may be regarded as classic. We think it decidedly the best of the numerous good books written by that eminent surgeon. This edition of the work has been thoroughly revised and brought fully up with the times. Many new illustrations have been added and new material engrafted. We do not hesitate to recommend the work heartily as one of the best ever presented upon the subject.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX.
A Work of Reference for Medical Practitioners. Eighteenth Year—1900. E. B. TREAT & Co., New York and Chicago.

This once-a-year visitor has been received and heartily welcomed. The design of the work is to present in a small compass the advances made in every department of medicine during the year last passed, and it embraces in addition a number of original articles by various authors, of the greatest practical value, covering the whole range of medicine and surgery. We are of the opinion that this volume surpasses any of its predecessors in its make-up and its valuable material.

A TEXT-BOOK OF THE MEDICAL TREATMENT OF DISEASES AND SYMPTOMS. By NESTOR TIRARD, M.D., LOND., F.R.C.P., Professor of the Principles and Practice of Medicine, King's College, London; Physician to King's College Hospital; Examiner in Materia Medica to the Conjoint Board of England. Adapted to the United States Pharmacopœia, by E. QUIN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica, Jefferson Medical College, Philadelphia. LRA BROTHERS & Co., Philadelphia and New York. 1900.

We feel sure that this work will rapidly come into favor with students and practitioners. As its title indicates it is intended as a guide to the treatment of diseases and conditions, and as such will prove of material help to the physi-

cian. It deals comprehensively with therapeutical medications and presents a great number of well-selected formulas of every day use. As the American publisher says in a preface note: "It will enable the student to bridge the gap between his knowledge of theory and its application at the bedside, always a difficult transition, and it will afford the practitioner suggestions for meeting all symptoms, stages and complications of medical diseases, space being devoted to full details." Certainly this is a work destined to become popular, and we take great pleasure in commending it in the highest terms to the profession.

TWENTY-FIFTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN for the Fiscal Year Ending June 30, 1897. By Authority. ROBERT SMITH PRINTING Co., Lansing, Mich. 1899.

This is the Twenty-Fifth Annual Report of the State Board of Health of Michigan, and it will, as usual, be warmly welcomed by sanitarians all over the country, for it always contains a number of important papers bearing upon the public health and preventive medicine that is of great practical value to the profession.

Publishers' Department.

A CASE OF SINUS. — G. W. Bodey, M.D. of Kettlers ville, Ohio, writes under date of Sept 17, 1899, to the *Medical Record* as follows: I used Ecthol on a case of sinus extending from the inner and middle of the right thigh upward and outward $9\frac{1}{4}$ inches in length. It had been operated on in that locality twice, also once on the canal from the psoas abscess, its starting point. The sinus was lined with a tough pyogenic membrane, so that by inserting the index finger its full length occasioned no pain. The young man, 22 years old, would submit to no further operation. I inserted perforated rubber tube, one-half inch in diameter, nine inches, burned or destroyed the membrane with chloride of zinc solution, after which I used Ecthol, filled the cavity completely full three times a day, by which the pus ceased to flow from the very beginning. I continued its use until I could not insert even a catheter. I applied a rubber bandage for five weeks, dismissed him then as cured; the period extended eight months. I used five bottles of Ecthol. I dismissed the case in May last, and will wait to see further results; then I will try to write an article on that case and on two others on whom I used the medicine. My faith in Ecthol is unlimited, and can only say the case above described, from a city of twenty-eight physicians, has increased my practice in that locality.

CAUTION REGARDING HEROIN. — The April *Druggists' Circular and Chemical Gazette* says in substance: "Under the above heading we mentioned in our March issue two cases in

which persistent vomiting followed the use of this drug, in one of which a fatal termination was at least partly chargeable to this action. These cases, as we stated in our note, were reported by Dr. Thomson in the *New York Medical Journal*. This report has brought to the *Journal* from Dr. Wm. J. Robinson a statement of two cases in his own practice, of a similar nature. Dr. Robinson suggests that there is a possibility that Heroin, which is diacetyl-morphine, may in such cases have become transformed into apomorphine for some similar body. Dr. Manges calls attention in the same journal to a statement of his in a report on a study of Heroin, that "vomiting might occur after its use." He makes it a rule to tell patients that when vomiting does occur to discontinue the drug. The doses given in the case that ended fatally he thinks were excessive. These new statements add further proof to the uncertain action of the drug; and we think that it is quite plain that it needs more watching than opiates in general. The untoward and even serious after effects of Heroin bring forcibly to mind the many excellent and time-tried remedial qualities of codeine—always safe, always certain and uniform. The combination of codeine with antikamnia presents a most desirable mode of obtaining the full value of these two excellent remedies, and there is no better form in which to exhibit them than in the well-known antikamnia and codeine tablets, each containing $4\frac{3}{4}$ grains antikamnia and $\frac{1}{4}$ grain codeine.

VAGINAL DOUCHING.—In Gould's Year Book of Medicine and Surgery for 1900, Byron Robinson, M.D., of Chicago, Ill., in advocating the use of vaginal douching says that when properly used it is capable of doing a vast amount of good, but much depends upon the amount of fluid, the degree of heat, etc. He advises a fountain syringe with a four-foot lead and holding at least four gallons, and at a temperature of 103° F., and increased until as hot as can be borne. Begin with three quarts and increase one pint a day until four gallons are taken. He also advises that some astringent preparation should be used to check waste of secretions.

For this purpose Micajah's Medicated Uterine Wafers are especially useful. They are astringent in action, thus contracting the vessels and tissues, and check waste of secretions. They prevent reaction after douching and stimulate the mucus membranes. They are antiseptic, and should always be used in connection with the vaginal douche for the above reasons

SANMETTO ENDORSED AFTER WATCHING ITS EFFECTS IN SEVERAL HUNDRED CASES OF GENITO-URINARY DISEASES.—It gives me great pleasure to add my testimony to that of the many eminent physicians in this city and elsewhere, attesting the wonderful curative value of Sanmetto. In nearly all genito urinary ailments, especially of a chronic nature, it is simply invaluable. I consider Sanmetto almost a specific for chronic prostatitis, especially in old men, where more or less hypertrophy exists; also in weakness of the generative system, it has wonderful power in restoring waning sexual strength. This is my first testimonial for any medicine, but having prescribed Sanmetto ever since its introduction to the profession, and watched its effects in several hundred cases, I feel that I need not hesitate to endorse it.

Chicago, Ill.

L. E. MILEY, M.D.

THE superior appliances of G. W. Flavell & Bro., Philadelphia, Pa., have been successfully used with the most satisfactory results, and physicians are cordially requested to order direct from the firm, as it saves time and expense. Their goods are noted for excellence of quality, durability and low standard of prices, which are unsurpassed

A FINE BUGGY OR CARRIAGE adds much to a physician's equipment. Any of our readers who desire "rolling stock" will benefit by writing to Deeds & Hersig, 152 N. Market street, Nashville, Tenn. Their vehicles are of the latest patterns, and those for doctors are of exceptional beauty and usefulness. Write to them for prices and particulars.

POLONIUS gave to his son the advice—

“Costly thy apparel as thy purse can buy,
Neat, but not gaudy.”

The old philosopher was right—“the apparel oft proclaims the man.” The Hines-Talbot Co., 409 Church street, Nashville, Tenn, will fit you out in fine shape at a minimum of cost Give them a chance to show what they can do.

“ See how it sparkles,
This drink divine !”—

are a few words from the drinking song in “Girofla-Girofla.” But had M. Lecocq. who wrote the foregoing, used his talents in these closing days of the XIXth century, he would certainly have put in a verse or two concerning the health-producing properties of Gerst Beer. As to its tonic qualities and effects, write to the William Gerst Brewing Co., Nashville, Tenn. Physicians get a special price on this tonic beverage.

THE preparations of “Pepsin,” made by Robinson-Pettet Co., are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufacturing house.

NASHVILLE JOURNAL
—OF—
MEDICINE AND SURGERY.

C. S. BRIGGS, A. M., M. D., EDITOR.

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Original Communications.

CHRONIC SUPPURATIVE CYSTITIS.*

BY CHAS. A. ROBERTSON, M.D., PH.G.

Professor of Obstetrics in the Medical Department of the University of the South; Professor of Materia Medica in the Dental Department of the University of Tennessee.

Mr. President and Gentlemen:

The following case is reported because of the interesting pathological condition found upon post-mortem examination; also to emphasize the importance of making more than a casual examination in aged men suffering from vesical disease, thus avoiding a common error in diagnosis, of which this case is an example.

Cyrus B., age 71; resident of Williamson County, Tenn.; married; father of three children, all of whom are alive and

* Read before the Middle Tennessee Medical Association, May 17, 1900.

in good health. The patient came of excellent stock ; family history shows no evidence of hereditary disease or constitutional taint. The patient has always been in good health and quite robust.

About April, 1899, while attending to some duties on his farm, the patient sat down on a rock by the roadway. The day was chilly and damp. After remaining in this position for several hours, he returned to his house in his usual good health, but in a few hours he was stricken with a malady which produced results that cost him his life more than a year afterwards.

He was seized with a moderately severe chill, followed by excruciating pain in the deep perineal region ; more or less pain beneath the pubic symphysis; marked vesical tenesmus, followed by more or less spasmodic pain in the rectum. The patient went to bed and summoned a very competent and intelligent physician. The diagnosis and treatment at this time I have been unable to ascertain.

The progress of the case was slow and painful, but the more acute symptoms gradually abated. While the patient recovered sufficiently to get out of bed, he was never able to return to active duties upon his farm.

Frequent and painful micturition, pyuria, slight and transient hematuria, were sufficient to produce a painful and miserable state of invalidism. After more or less confinement to bed for about a year, I was requested to see him in consultation with his attending physician. I accordingly examined the case about the middle of April of the present year. I found that the patient had just passed through a sharp attack of la grippe and was still suffering with a slight daily rise of temperature, amounting to not more than 100° F. There was considerable bronchial catarrh with muco-purulent expectorations. The patient was very weak and emaciated, with little or no appetite, occasional vomiting, with persistent constipation.

• He was complaining considerably of the bladder symptoms already outlined, which occasioned constant restlessness. Upon examination per rectum I found that his bladder wall was considerably thickened and leathery to the touch, marked

tenderness on pressure; the prostate gland seemed only slightly larger than normal, but elicited pain on contact with my finger-tip. There was nothing abnormal about the rectum. The bladder anteriorly was painfully tender on palpation. The patient was unable to control his urine, voiding it with a free stream but with agonizing vesical pain. The urine was loaded with muco-purulent material and epithelial debris, alkaline in reaction, and of a decided ammoniacal odor. The capacity of the bladder was estimated at about four ounces. A sound was passed per urethram without difficulty or meeting obstruction, and the bladder was subsequently sounded for stone, with negative results.

The attending physician gave it as his opinion that the patient was suffering with "senile hypertrophic prostatitis, complicated with cystitis, due to residual urine. His prognosis was unfavorable, the disease being an incurable one."

I ventured to differ from the opinion of my very capable confrere, however much I disliked to do so. In my opinion the case was, in the beginning, one of catarrhal cystitis, subsequently suppurative, and owed its existence to an improperly-treated acute prostatitis and vesical catarrh. My prognosis as to a cure was, of course, unfavorable, but as to fair health, moderate comfort and usefulness, I thought the outlook good. I also advanced the opinion that if local treatment in the form of irrigation, coupled with systemic and tonic medication, could be carried out successfully without interruption for a reasonable length of time, a marked improvement would follow.

The attending physician relinquished the case, saying he could do nothing further for the sufferer.

On April 28 the patient was brought to the city for treatment and placed under my care. I at once instituted treatment for the gastric upset, which consisted of the administration of moderate doses of mercurous chloride and careful regulation of diet, with perfect success for a time. The hypophosphites of iron, manganese and lime, combined with strychnine and quinine in the form of Fellows' Comp. Syrup of Hypophosphites, was ordered, in conjunction with malt, as a tonic and tissue builder; urotropin in 5-grain doses every four hours

during waking hours as a urinary antiseptic; daily irrigation of his bladder with a saturated solution of boric acid at first, subsequently a solution of 1 to 6000 permanganate of potassium was substituted. The beneficial effect of this local treatment was apparent from the beginning—almost perfect relief of vesical pain resulting.

The patient made such rapid and satisfactory progress within the first week after beginning the treatment just outlined that I was encouraged to believe that fair health and usefulness were assured.

On May 6 nausea and vomiting returned; bowels inactive; great prostration supervened, necessitating the withdrawal of all treatment except sustaining measures, which did not succeed in averting the approaching exhaustion, and the patient died in the early morning of May 12.

A necropsy was asked for, which was granted by the family. Within two hours after death I removed his bladder and prostate gland, both of which I have here for your inspection. You will observe the prostate, with its three lobes, is about normal in size. It was carefully weighed within an hour after its removal, and found to weigh 373 grains. [NOTE.—The weight of a normal prostate, as given by the several authorities on anatomy, ranges from four to six drachms.] The bladder was very much contracted, having a capacity of only three or four ounces; the walls very much thickened. The interior of the bladder bears the evidence of long-continued suppuration, almost the entire mucosa being destroyed or so altered in appearance that it bears little resemblance to the normal mucous membrane. Strong bands of indurated tissue are seen to traverse, irregularly, the inner coat of the bladder. Numerous pockets are seen in between these folds of indurated tissue, which were excavated by ulcerative inflammation. By gentle pressure upon the bladder wall numerous small abscesses were ruptured, indicating that the submucous connective tissues have become invaded. The ureters at their vesical openings showed signs of the involvement of these tracts, and within a short time renal complications would have developed—if, indeed, infection of these organs had not already taken place.

Unfortunately, I did not remove the kidneys; hence I have no positive knowledge of their condition.

There are several conclusions to be drawn from this case.

1. That it is of paramount importance to make an early diagnosis of vesical catarrh and to institute efficient treatment promptly. Had this case been properly treated during its early stages, there is no question in my mind but that a cure could have been obtained.

2. The importance of a careful examination of the prostate per rectum, in order to determine the presence of a hypertrophy of this gland as a factor in the causation of cystitis. I think many of us are prone to "jump at conclusions" after hearing a history of vesical disturbance in men above the age of 60 years, and make a diagnosis of hypertrophic prostatitis. While it is a fact that hypertrophy of this gland is the most frequent cause of vesical disease in old people, it by no means follows that they cannot suffer from chronic cystitis due to other causes.

3. This case explains the phenomena often met with in the treatment of chronic cystitis, viz., the disappearance of pyuria for a few days under irrigation and antiseptic treatment, and the sudden reappearance of pus in the urine without interruption of treatment. This I believe to be due to the rupturing of intramural abscesses finding their way into the cavity of the bladder by ulcerative inflammation.

4. If we had some means at our command to determine the invasion of the submucous connective tissue by pyogenic organisms, we would be able to give a more accurate prognosis. In my opinion, when such invasion—to any marked degree—has taken place, the case is hopelessly incurable and cannot be materially benefitted.

The use of the cystoscope is practically valueless as a means of diagnosis of submucous involvement.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY—MEETING OF APRIL 20, 1900.

RESECTION OF THE HIP.

Dr. B. F. Curtis presented a boy 18 years old whose right hip had been resected for tuberculous arthritis of seven years' duration. The hip was fixed in dorsal dislocation, with the typical deformity of adduction, flexion and inward rotation, and three sinuses existed on the posterior, anterior and internal surfaces. There was slight flexion and extension, rotation was diminished, abduction possible to ten degrees. Operation by posterior incision Sept. 26. 1896. Resection of head and three inches of femur. The pelvis was found healthy. The sinuses were curetted, the wound partly sutured, partly packed, and a good recovery followed. A Buck extension apparatus was applied and the limb kept in slight abduction. Nov. 16 a hip splint was applied and the patient allowed up. The sinuses had healed by Nov. 23, and Dec. 11, 1896, he was discharged. There was four inches of shortening, the limb was in good position, the upper end of the fragment being strongly united with the pelvis at the level of the acetabulum, with no slipping. A limited amount of flexion and extension was possible, but no rotation. There was no sign of recurrence, the patient was well and walked with a cane. He wore the splint for a few months after leaving the hospital.

OSTEOTOMY FOR DEFORMITY FOLLOWING HIP DISEASE.

Dr. Curtis also presented a boy 17 years old who recovered from hip disease with the hip flexed to ten degrees, about ten degrees of flexion and extension allowed about that point. No rotation. On Dec. 23, 1897, there was no sign of active disease, and an incision was made through the soft parts in front, below and parallel to Poupart's ligament, dividing everything down to the joint, including its capsule, and excluding only the vessels and nerves. This allowed extension to forty-five degrees, the tension of the vessels not warranting more. The femur was then partly divided by the osteotome and partly broken above the lesser trochanter, its posterior layer being left. Full extension was then possible. The large wound was covered by a flap from the abdomen and a Buck's extension was applied. Hemorrhage the following night was controlled by packing, and extension was removed. Infection followed, with complete fracture and overriding of the fragment and partial sloughing of the flap. The second day extension was reapplied and the bone set. On Jan. 20, 1898, the wound was clean and grafting was done over the large granulating area. By the end of February the wound was healed, with shortening of two inches. On March 19 a hip splint was applied. The boy was walking without a brace. There was practically no motion in the joint. Bony union was firm. The deep depression at the site of the wound caused no inconvenience. The brace was occasionally reapplied for a few days for some pain in the hip.

Dr. A. B. Judson said that operating in hip disease was less likely to be followed by a bad result in an adult than in a child.

Dr. G. R. Elliott said that the relation of these cases emphasized the importance of preventing the need of such operations, which should never be required. They indicated gross negligence in the treatment of the disease giving rise to the deformity. Patients with hip disease drift through general hospitals and come out with badly-displaced limbs from the absence of adequate treatment. In an institution which he attended surgically there were a dozen cases of old hip disease, with limbs at all sorts of angles, showing that no

care had been taken in hospital and private treatment to keep them in proper position while the bone was breaking down and undergoing repair. The prevention of these deformities was not difficult.

Dr. W. R. Townsend recalled a similar case of osteotomy. After dividing the soft parts by an open incision including the capsule, it was found impossible to get the limb down. The capsule was allowed to heal before osteotomy was done, which he thought was better than to complete the reduction at one sitting:

TREATMENT OF TORTICOLLIS.

Dr. Townsend presented a girl 12 years old who had been relieved of torticollis, the result of suppurative cervical adenitis at the age of 5, which had produced cicatricial adhesion to the left sterno-cleido-mastoid muscle. The head had been increasing for four or five years. On Feb. 1, 1900, an open incision $1\frac{1}{2}$ inches long, about two inches above the clavicle over the belly of the muscle, and free section of all the resisting structures, had relieved the deformity. The head had been held in the opposite position by plaster bandages. There had been no pain, the temperature had never been above 99° , and the wound healed by primary union. The result was satisfactory. The head was in good position, with motion. A little gap was felt below the scar, but the muscle had probably united. Subcutaneous tenotomy would have been impossible, as it had been necessary to carry the incision to a point where no one would have dared to go. In general he preferred the open incision for division of this muscle.

Dr. R. A. Hibbs commended the open incision. In a recent operation on a girl 5 years old, after section of the sternal portion of the muscle the deformity was only relieved by division of the clavicular portion through another skin opening.

Dr. R. Whitman practised the open incision in torticollis. Complete division of all contractions, correction of the secondary distortion by vigorous manipulation, fixation for a time in the over-corrected position by a plaster bandage, and after-treatment by proper exercise, would secure good results without the subsequent use of apparatus.

SPONDYLITIS DEFORMANS.

Dr. Whitman presented a man 46 years old with a spine ankylosed excepting the occipito-axoid joints. Fourteen years before, a long and severe attack of inflammatory rheumatism had affected nearly every joint excepting those of the back. This and several milder attacks in the next nine years had been coincident with gonorrhea, which had been absent the past five years, while rheumatism had involved the back and with a persistent "lumbago" the entire spine had become rigid. There was pain in the loins and under the shoulder-blades, increased by walking and by jars. The patient was nervous and irritable and easily startled, and felt as if the forehead were clasped by a tight band. His equilibrium was disturbed by the forward projection of the head and by the obliteration of the normal lordosis, so that he felt himself constantly inclined to fall forward, whether sitting or standing.

Dr. Elliott asked whether gonorrhea was excluded as a cause.

Dr. Whitman did not know whether the so-called rheumatism which had involved the back was gonorrheal in its origin or not.

Dr. Elliott asked whether the deformity was bony or fibrous.

Dr. Whitman thought it was partly fibrous and partly bony, an ossifying periostitis. The spine was not entirely rigid, as there was discomfort on changing the position, although motion could not be demonstrated. He intended to try suspension as an experiment.

HEMARTHROSIS OF THE KNEE.

Dr. Hibbs presented two brothers, aged respectively 11 and 15 years. There was marked effusion and limitation of motion, without reflex muscular spasm, in both knees of the older boy and the left knee of the younger. The swelling was marked. The patients were first seen in July, 1899, two weeks after the elder had a hemorrhage from the lips accompanied by what was evidently an acute hemorrhagic swelling of both knees. Elastic knee-caps were ordered, with immediate comfort, and the boys were not seen again until recently.

A feature of the history of each patient was that bleeding had occurred from various organs at intervals of one, two and three months, and that with each recurrence walking was rendered impossible by the tense and painful swelling of the knees. No other joint had been affected. Their father had died of some acute disease, and their mother was living and healthy. Two hemophiliac brothers had died in infancy, but a sister was living and healthy. The synovitis caused by the hemorrhages had been prevented from resolution by their frequent recurrence. The effect of applying pressure would be observed and recorded.

Dr. C. A. Elsberg recurred to the case reported by him at the meeting of the Section held on Oct. 26, 1899.

A boy 2 years old had hemorrhage into the knee, and three or four weeks later similar occurrences in three of the finger joints in a family in which the male children of healthy mothers had been hemophiliac. An elastic knee-cap had been applied, and the child was fed on gelatine for a while on a theoretical rather than on any other basis. The patient was seen once a month and the blood in the knee was gradually absorbed, leaving the joint in a practically normal condition. He would continue to wear the knee-cap, removing it only at night. There had been repeated hemorrhages under the skin, but no return of bleeding into a joint.

Dr. H. S. Stokes said that hemophilia was generally transmitted through the mother to her male offspring, the daughters, like the mother, showing no sign of the condition, although their male children were almost certain to be hemophiliac. The recurrence of swelling of the joint did not necessarily indicate another hemorrhage. A subacute or chronic synovitis was set up by the extravasation and more or less imperfect absorption. After a hemorrhage, treatment should be prolonged to promote and terminate absorption. The general treatment should receive attention, and rest, immobilization, pressure, strapping and counter-irritation should constitute the local treatment.

Dr. Hibbs said that, if done, strapping would have to be continued indefinitely, as the knees in his cases were swollen all the time. The effect of one hemorrhage did not disappear before the occurrence of another.

A RUBBER SPLINT SHOE.

Dr. H. J. Bogardus exhibited a hip splint which was shod, not with leather but with a piece of the rubber tire in common use on the wheels of road vehicles. The tires were made in widths varying by one-eighth of an inch, and in length about thirteen feet; of which the waste ends were suitable for this purpose. A piece could be cut off with a wet knife blade and fastened on easily and most securely by the ingenious and yet simple application of a couple of screws. In economy, durability and noiselessness, the shoe commends itself.

ADDITIONAL MECHANISM FOR THE HIP SPLINT.

Dr. Hibbs exhibited a modified hip splint. The upright was a hollow rod constructed in the usual manner, except that it reached the ground and ended in a foot-piece suitably shod for bearing the patient's weight. It also had a slot on its inner side, which permitted a sliding rod to carry a second foot-piece, not shod, to which were attached the leather traction straps. The sliding rod had at its upper part a rack moved by the usual pinion or key, and at its lower part a veritable ratchet and spring catch. When the patient was recumbent, traction was made by the key and secured in the usual manner, and when the patient stood the downward pressure of his foot on the movable foot-piece took in the slack of the traction straps, the additional traction thus made being retained by the automatic action of the spring catch of the ratchet.

Dr. Whitman said that the arrangement was much better than the ordinary one, but a disadvantage was that the brace could not be made longer, and therefore would be outgrown in a short time.

Dr. Hibbs said that when the upright of the ordinary splint was lengthened with the key it was thus weakened, and had also to be replaced by a longer one.

Dr. Judson said that the additional traction gained when the patient was erect would prove to be too much when the patient lay down again.

Dr. Hibbs said that when necessary—which would not often happen—the extra traction could be relaxed by the attendant, or the patient could loosen the buckles of the perineal straps.

Selected Articles.

THE ASSOCIATION OF CHRONIC APPENDICITIS WITH DISEASE OF THE RIGHT ADNEXA.

BY HIRAM M. VINEBERG, M.D.

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Considerable has already been written upon the differential diagnosis between appendicitis in women and disease of the right adnexia. The writer himself, in a short paper in the *Medical Review* of Dec. 21, 1896, drew attention to the close similarity in the clinical picture between acute catarrhal salpingitis and acute catarrhal appendicitis, and related some cases in which the differentiation was well-nigh impossible. But in this communication he desires to draw attention to the not-infrequent association of the two diseases in the same patient.

Every operator who has to deal with abdominal and pelvic lesions, encounters every now and then in cases of marked disease of the right adnexa a thickened and inflamed appendix adherent to the pelvic mass. Such appendices usually show unmistakable signs that they have become involved secondarily to the tubal disease. They are, as a rule, considerably enlarged through thickening of the wall of the peritoneal covering, with thickening also of the meso-appendix. They usually lie in the midst of an exudate covering the pyosalpinx, or an ovarian abscess, or ruptured tubal sac. Such a complication seldom gives rise to any characteristic sign or symptom

by which it may be suspected prior to operation. It derives its importance chiefly from a technical consideration when, as is the custom nowadays with many operators, to attack tubal and ovarian diseases through the vaginal route. In such a procedure, of course, the secondarily affected appendix would probably be overlooked, and doubtless would interfere with a satisfactory return to good health.

Within the past few years in my laparotomy cases I must have met with over a dozen presenting the foregoing complication, and of course removed the diseased appendix together with the diseased pelvic structures.

One case last summer (published in full in the *American Gynecological and Obstetrical Journal*, January, 1900) was particularly instructive in this connection. The woman had a large pelvic hematocele as the result of a ruptured tubal sac some weeks previous. As the collection of blood was very accessible through an incision in the posterior vaginal vault, the temptation was strong to adopt that plan of procedure. But the case presented some features which it was thought demanded an abdominal incision. They proved to be an intraligamentous cyst of the left ovary independent of the hematocele. Lying buried in a deep exudate in the upper surface of the hematocele was found a very much thickened appendix, the size of one's thumb. Both it and the intraligamentous cyst were removed. The hematocele was then evacuated by a free incision in the posterior vaginal vault. The patient made a good recovery from the operation, and has enjoyed the very best health since. Further comment is unnecessary.

The object of this paper, however, is not to dwell at any length upon those cases just referred to, in which, in the presence of marked right adnexal disease, there is a secondarily diseased appendix lying in contiguity to the former; it is rather to call attention to those puzzling cases in which the patient suffers from symptoms vaguely referred to the right lower half of the abdomen, and in which the diagnosis vacillates between chronic catarrhal appendicitis and a mild form of salpingo-oophoritis. These cases in reality show an association of the two affections in the same patient. The opera-

tion will disclose a thickened, inflamed right tube, with some inflammatory changes in the ovary, and an appendix showing more or less disease. At one time the changes will be most marked in the appendix; at another they will be found most pronounced in the right tube or right ovary. It is not always easy to trace the casual relation of the two infections. In many of the cases I have operated upon the distance between the appendix and the tube was too great to assume an extension by contiguity of the inflammatory process from one to the other. In some cases, however, there was general relaxation of the abdominal supports, so that the right kidney was found moderately prolapsed and the uterus in more or less retroversion, with the adnexa hanging rather low in the pelvic cavity. Whether the prolapsed kidney and the appendicitis stood in the relation of cause and effect, as maintained by Edebohls,* I am unable to say. I am rather inclined to the view that the same factor—relaxation of the abdominal supports—must be looked upon as contributing equally to the changes in the different organs in the abdominal and pelvic cavities. The subject, however, requires for its elucidation much more extensive investigation than has as yet been accorded to it. The profession owes a debt of gratitude to Edebohls for having called attention to it, and for having stimulated observation and thought in this direction by his publications.

As already hinted, the symptoms from which these patients suffer are rather vague. But there is one feature which stands out rather prominently, and that is, the subjective symptoms and general debility are out of all proportion to physical signs found. There may be, and there usually is, indefinite tenderness over appendicular region, but I must confess that I have seldom been able to determine by palpation the slight changes that are usually found in these forms of chronic appendicitis. I have relied more upon tenderness and pain than upon my ability to detect by palpation a constriction of the appendix or moderate adhesions or an inflammation of the peritoneal covering. On bimanual examination the right tube is found de-

* *Centralblatt für Gynäkologie*, 1899, pp. 1084-1090; *Medical Record*, 1899, pp. 341-345.

cidedly tender and more or less thickened, and the ovary is usually slightly enlarged and moderately prolapsed. The symptoms usually set in insidiously. The patient cannot tell just when she began to suffer from pain in the right side of the lower abdomen. During the subsequent course of her ailment she may or may not have had one or more acute attacks, which at one time may have been diagnosticated as appendicitis, at another as right-side salpingitis, or oophoritis, or as pelvic peritonitis. In other cases, again, there may be an entire absence of any acute attacks. Pain and ill-health may be the only prominent symptoms present, and at no time will there have been observed any elevation of temperature or any marked change in the pulse rate.

These patients are sometimes operated upon for supposed appendicitis, and the removed appendix shows some slight lesion. But the pain continues, and a second laparotomy reveals a diseased right tube or ovary, which is excised and the patient is cured *. Such an experience must cause the operator very much chagrin, to say nothing of the mental agony and physical suffering which a patient endures who has to undergo a second laparotomy shortly after having been subjected to the first. To avoid such a pitfall one should adopt the rule always to investigate the condition of the right adnexa when operating for appendicitis in female subjects, be they married or single.† The youth of the patient should not throw us off our guard, as the following case will illustrate:

* See case reported by Dr. R. F. Weir, in a paper entitled "An Improved Operation for Acute Appendicitis," in the *Medical News*, Feb. 17, 1900.

† I learned this lesson from an unpleasant experience some five years ago. I had operated upon a woman 24 years of age for acute appendicitis. The appendix was swollen and contained pus. The operation passed off smoothly and the patient made an apparently good recovery. She was up out of bed at the end of two weeks. A couple of days after getting up she was seized with pelvic pain and developed fever. A small pelvic abscess was detected, and being excised through the vagina, convalescence was soon established, which was now permanent. I had no doubt afterward that at the time of operation the patient had some trouble with the right adnexa, which should have been investigated then.

Case I.—Chronic catarrhal appendicitis, adherent tube and ovary; operation; recovery. Miss S., aged 16 years. The menses were established in her twelfth year; they were regular and attended with only moderate pain. She had been well until a year ago, when she had an acute attack of pain in the right side of the abdomen, which kept her in bed for a day or two. She had another attack of a more severe nature while in the country during the past summer. The physician there diagnosticated right-sided oophoritis. The pain, with variable severity, continued until her return to the city, when she consulted her family physician, who made the diagnosis of appendicitis. He kindly referred her to me, and on examination I found decided tenderness over the appendicular region, but could not with certainty palpate the appendix. Bimanual examination was made with a finger in the rectum. Considerable tenderness was detected over the right adnxa and they seemed adherent. She was operated upon Nov. 30, 1898, by an oblique incision over the usual appendicular site. The appendix was found, after considerable search, behind the cecum and pointing downward into the pelvic cavity. It was very firmly and extensively adherent, the distal end lying in a sheath of exudate. After excising the appendix, I introduced two fingers through the incision and explored the right side of the pelvic cavity. The right ovary was found moderately enlarged and adherent. The adhesions were gently broken up and the ovary brought up into its normal position. The abdominal wound was closed with tier sutures. Recovery was uneventful. The patient has remained free from pain since the operation.

In the majority of cases presenting the complex phenomena outlined in this paper, the more desirable and prudent course to pursue is to open the abdomen in the median line, when the appendix, uterus, and its adnexa, can be treated surgically if their condition requires it. No better illustration can be offered of the wisdom of such a plan of procedure than is presented by the following case:

Case II.—Median laparotomy; excision of appendix; suture of round ligaments to abdominal wall; excision and puncture of cysts in both ovaries. Mrs, W——, 25 years of

age, married eighteen months, gave birth to a child eight and a half months ago. She has been ailing ever since the confinement, which seemed to be perfectly normal. Before this she had enjoyed excellent health. She resides in a Western town. The physician who attended her last writes that she consulted him November 18, 1899. "She was suffering from pain in the right side of the abdomen, backache, dragging pelvic pains, and from profuse leucorrhœa. I found the cecal, ascending colon, right inguinal and hypogastric regions extremely tender, almost painful. The epigastric region was tender to painfulness on percussion. The endometrium was exquisitely tender. Temperature was normal. I gave her three local treatments, and advised recumbent position and hot douches. On Dec. 15 she aborted. The products of conception were less than two months (not over). After this accident she kept her bed eight days and her distress almost disappeared. After being on her feet, distress returned, disabling her almost. Her husband then took her to a large city in the vicinity and consulted two of the most prominent operators there. One diagnosticated appendicitis, the other inflammation of the right ovary. Both urged immediate operation. The diametrically opposed opinions of these two surgeons unsettled the man's confidence and placed him in a quandary. He then came on here with his wife and was referred to me. She is a tall, slender, delicate-looking woman with rather pale mucous membranes. She complains of constant backaches, pain across the hypogastrium and over the abdomen in general. The pain is most severe in the right inguinal region, and extends down to the right thigh, which she says feels numb. She suffers from general debility, loss of flesh (having lost fifteen pounds in weight since the birth of her child), loss of appetite, constipation, and sleeplessness. For weeks past, she tells me, she has been unable to go to sleep without an opiate. The abdomen is very lax. There is marked tenderness over the cecal region and along the course of the ascending and transverse colon. The appendix is readily palpated, is markedly tender, but no decided thickening is detected. The kidneys are not found prolapsed. The uterus is large, succulent, tender, and in fair position. A thick, tena-

cious discharge fills the cervical canal. The right ovary is considerably enlarged, prolapsed and very tender. The left ovary does not seem to be enlarged. Urine withdrawn by catheter showed a moderate amount of albumin, but no casts. I declined to express an opinion as yet, and advised her entering a private sanatorium to be under observation and treatment. Under suitable regimen the kidneys soon acted normally. On the first day she passed only 700 c.c. urine; on the second, 1100 c.c.; on the third day, 1450 c.c.; and from this on the amount and quality were normal.

At my second examination the uterus was found in complete retroversion, in which position it was found at every subsequent daily examination during the week prior to the operation. The abdominal pain and tenderness persisted in spite of rest in bed and appropriate treatment. I concluded I had to deal with a case of chronic appendicitis, associated with subinvolution and retroversion of the uterus and cystic degeneration of the right ovary.

On Feb. 4, 1900, I performed median laparotomy, having first dilated and curetted the uterus. The right ovary contained a cyst the size of an almond, which was excised and the wound in the ovary sutured with catgut. A similar-sized cyst was found in the left ovary, which was treated in the same way. The uterus lay in complete retroversion. It was brought forward and held in position by suturing the round ligaments to the fascia of the rectus muscle. A search was now made for the appendix. It was readily found in the usual position, covered with a few membranous adhesions, and the peritoneal covering was highly infected. Appendectomy was done in the customary manner. The appendix, on being slit open, presented an erosion of the mucosa the size of a five-cent piece. The abdominal wound was closed with tier sutures. Recovery from the operation was perfectly normal. The patient is making a rapid and satisfactory convalescence. She is free from pain, has a good appetite, sleeps well, and has gained $3\frac{1}{2}$ pounds in the first week after getting up from bed.

It may be argued that the appendix would be difficult of access by a median laparotomy, especially when it was extensively and firmly adherent. Such, however, has not been

my experience in the class of cases under consideration. As a rule, the appendices in these cases are but slightly adherent, and are very easily reached by a median incision. Still, if on examination prior to operation a firm adhesion to the appendix is suspected, then the Battle-Kammerer incision through the sheath of the right rectus muscle, with traction of the muscle toward the median line, may be adopted. This incision gives ready access to most of the situations which a diseased appendix may adopt, while it permits at the same time with moderate ease the examination and surgical treatment of the right adnexa. I have at times been able to investigate through it the condition of the uterus, and even of the left adnexa. When I am morally certain beforehand that disease of the appendix exists, I usually adopt this incision. It seems to me to be preferable to the rather complicated incisions recently recommended* to accomplish the purpose of investigating the condition of the right adnexa when operating for appendicitis in female subjects.

Of course, cases of appendicitis are sometimes encountered in which neither of the two foregoing incisions will be applicable, I merely make this statement so as not to be understood as advocating certain incisions for all varieties of appendicitis. A few weeks ago I operated upon a woman in whom I could feel an enlarged appendix lying firmly attached to the side of the ileum. I made an oblique incision directly over the mass, and found the appendix firmly adherent to the iliac wall, lying to the outer part and behind the cecum. It was imbedded in a mass, in the centre of which was about two ounces of pus. After having located the position of the appendix, and before attempting its removal, I enlarged the incision downward, so as to bring within reach the right adnexa. I found the right ovary converted into a cyst the size of a hen's egg, and removed it. Then, after walling off the intestines as well as possible, I proceeded with the removal of the appendix. While enucleating it from its bed of exudate some pus (about two ounces) appeared, which was quickly mopped

* See papers by Dr. Robert F. Weir (*The Medical News*, Feb. 17, 1900) Dr. Willy Meyer (*The Journal of the American Medical Association*, Feb. 17, 1900), and Dr. George R. Fowler (*The Medical News*, March 3, 1900).

up. The abdomen was closed with tier sutures, save a small area where a gauze strip passed down to the abscess cavity. This was removed in three days, and the patient made a perfectly normal recovery, leaving for her home in a neighboring town fifteen days after the operation.

Nowadays the question is frequently asked: When doing a laparotomy for pelvic lesions, do you always search for the appendix and remove it, be it diseased or not? The question, no doubt, would be differently answered by different gynecologists. My own practice is based on the principle never to remove a tissue unless its removal is indicated by disease. Whenever it is feasible, in the performance of a laparotomy, for other conditions than appendicitis, I search for the appendix for the purpose of investigation, but do not excise it unless it shows some pathological change. Personally, I do not feel justified in subjecting my patient to the additional risk, be it never so slight, of removing a healthy appendix, for the reason that at some future date it may become diseased. Of course, this is a matter of mere personal sentiment. I have said when it is feasible, for no operator, I take it, would be so foolhardy as to waste any time over the search for the appendix unless there were good reasons for so doing, after a very difficult and tedious operation on the pelvic viscera. Moreover, in these cases such a search is, as a rule, unnecessary, for if the appendix is at all involved it is generally found adherent to the diseased pelvic structures, and comes under the operator's hands without his having to look for it.

Medical Record.

Extracts from Home and Foreign Journals.

SURGICAL.

EXPERIMENTS ON INTESTINAL SUTURE.

The following experiments were made to determine the best method of circular suture of the intestine. The methods contrasted were: (1) Halsted's inflated rubber cylinders; (2) Murphy's button; and (3) Laplace's intestinal forceps. Seven experiments by each method were made on dogs. All recovered where Halsted's cylinders were used, five where Murphy's button was used, and four where Laplace's forceps were employed. The failures were all due to non-union.

From actual results the verdict is entirely in favor of Halsted's cylinders. The effect of the inflated cylinder is to push back the mucous membrane, which otherwise always is everted so much as to interfere materially with the surrounding of the outer coats, and the coaptation of the peritoneal surfaces. The cylinder also prevents the escape of the intestinal contents, thus dispensing with clamps.

Murphy's button is not trustworthy unless external sutures are applied. If this is done the time of the operation is lengthened, and the instrument becomes in part an apparatus for facilitating the application of sutures. After Halsted operation the animals passed formed stools on the next day. This is not so with the button, and the danger is not over till the button is expelled.

The Laplace forceps were very unsatisfactory, and afforded no aid in suturing, and in three out of seven cases failed.

The authors think that the difference in the thickness of the muscular coats of the intestines of dogs and men does not invalidate their conclusions — *Edmunds and Stubb, Lancet; Maryland Med. Monthly.*

LIVER ABSCESS AND APPENDICITIS.

E. Loison discusses the subject (*Revue de Chirurgie*), 1900, pp. 522). There are meager statistics on this point, the following being the only reliable data. Reginald Fitz in 257 appendicitis found 11 examples of suppurative phlebitis and hepatitis; Langheldt in 112 autopsies of appendicitis shows 4 cases of phlebitis and thrombosis, 2 of abscess of the liver, 2 of suppurative hepatitis, 2 of peri-hepatitis; Einhorn reports 100 appendicular post mortem examinations and found 6 complicated by infectious embolism of the portal vein, accompanied by pyophlebitis and by secondary abscess of the liver; Coley among 200 cases of appendicitis notes 2 of the liver and 1 of subphrenic abscess. Scattered through literature are other isolated cases beginning with 1849, when apparently the first reported instance was given. The avenues of infection may be the biliary canals. There is one well-established case of this on record. The usual ways of involvement are along the hepatic artery, the portal vein, the lymphatic system, and, by direct contact the peritoneum or retroperitoneal cellular planes. The arteries are the sources of deposit only as part of a general pyemia. The portal vein carries the germs directly in its current or as emboli following pyophlebitis with or without thrombosis. The lymphatics may connect immediately with those of the rest of the intestinal tract going to the liver, or by adhesions of the appendix with the parieties finally anastomose with the channels there and thus indirectly reach it. The pus may enter the mesentery of the appendix, burst through its base into the retrocecal cellular tissue and behind the colon in the retroperitoneal planes work upward. The causes of hepatic involvement are either unusual virulence of the germs or temporary depreciation of resistance, local and general. The ascent of the right lobe and fixation of the diaphragm as shown by the radioscope are excellent aids to definite diagnosis and often the site for explora-

tory puncture can be located. The prognosis is usually unfavorable in virtue of the combined appendicular and hepatic invasions. Multiple hepatic abscesses are almost always fatal. The prophylaxis is concerned with the early diagnosis and treatment of the appendicitis. Free evacuation and ample drainage of all the foci are the only treatment.—*Med. News.*

THE ULTIMATE RESULTS OF FRACTURE OF THE FEMUR.

Edw. Martin* has obtained some startling revelations by tracing the history of cases of femur fracture subsequent to their discharge "cured" by competent surgeons. The statistical details presented are exceedingly instructive, and are well deserving of perusal in the original. Only a few of the conclusions can be here given. In contrast to the accepted opinion that a fracture of the thigh requires treatment of from five to seven weeks, the fact was ascertained that the average period of treatment in bed and with crutches, splints and bandages is five months for children and eight months for adults. About 50 per cent of the cases in children and at least 90 per cent. in adults will have shortening of over one centimetre. An ultimate shortening of less than two centimetres will not be obtained in adults past twenty-one oftener than in one case out of ten. Even greater shortening is not in itself evidence of careless or improper treatment. Not more than one man in five who has sustained a simple fracture of the thigh will ever again be able-bodied. The other four will suffer from weakness and swelling of the leg and harassing pain, and, if laboring men, will be disbarred from their usual work. Disability is often proportionate to deformity, but not necessarily so. It is generally proportionate to age of the patient, men above forty rarely regaining full strength and activity. The difference between ultimate deformity and that measured at time of a patient's discharge seems to prove that consecutive shortening due to the weight of the body nearly always takes place. To obtain better results than heretofore, the author suggests making the effort to entirely overcome deformity by greater extension, or by wiring or plating if necessary, by a

**Therapeutic Gazette.*

systematic course of massage and passive motion continued for months, and by a much longer use of crutches, supplemented by a high shoe on the sound foot, short moulded splints about the site of fracture, and snug bandaging of the limb while dependent.—*Med. Review.*

MEDICAL.

THE USE OF OPIUM IN INFLAMMATION.

Sir Samuel Wilks (*Practitioner; Canadian Journal of Medicine and Surgery*, April), in a paper on the Treatment of Pneumonia, says:

“My own first knowledge of treating disease was from Addison, who was the leading light and teacher for many years at Guy’s. The routine method in all inflammatory diseases—in fact, in all affections whose names ended in ‘itis’—was the administration of a saline mixture with an antiphlogistic pill composed of calomel, antimony and opium; the antimony was sometimes omitted and the doses of opium and mercury modified according to circumstances. Whatever doubts I may entertain as to the value of antimony in inflammatory affections generally, I have none with regard to opium. I learned to give it from my master, and have continued the practice ever since. I have the firmest belief in its powers of arresting or controlling inflammatory action. I cannot doubt this when I witness a dose of laudanum at once stop a sore throat, and see a rapidly spreading ulcer on the leg quickly heal as soon as the patient takes opium. Just as this drug lowers or retards the natural functions and secretions of the body without other tissue changes, so it tends to arrest morbid processes or those unnaturally set up in various parts of the body. The most remarkable fact connected with this drug is the circumstance of its being so often put aside for very poor substitutes. When meeting medical men in consultation in cases of pneumonia, I very rarely find it given, and, on asking why not, the usual answer is that there is no indication for its use, there being no pain and no insomnia. It is quite the excep-

tion to find any younger man know of opium as a real remedy, or of its being antiphlogistic according to the old phraseology. I might add that Sir William Gull ordered opium in pneumonia up to his last days. Just as I have seen opium beneficial, so I believe many of its substitutes are very depressing. Scarcely one of these products made in the chemical laboratory, and which act so powerfully on the nervous system, but have a depressant effect on the heart's action. As a matter of safety when long continued none of them can be compared with opium, which may be taken with impunity for years any serious consequences. This can not be said of other substances.—*N. Y. Med. Jour.*

A CASE OF TETANUS SUCCESSFULLY TREATED WITH ANTI-TETANIC SERUM.

A German boy, aged 12 years, in good general health, wounded on palm of his left hand near the root of the third finger by the discharge of a blank cartridge in a toy pistol. The wound was thoroughly cleansed with 1-1000 mercuric chlorid solution, paper wad was removed, and after repeated syringing a cotton drainage was inserted and the bandage applied. There was nothing special in the symptoms during the next thirteen days, except rather free suppuration. Thirteen days after the injury he had some tenderness above his elbow, and there was found to be an enlarged and tender lymph node at the inner border of the biceps, two inches above the elbow. This was opened but did not show any pus. The wound in the palm of the hand was in favorable condition and nearly healed. That night his temperature was 103.2° F. He had no stiffness of the muscles of the throat or jaw. He could not open his mouth quite as wide as he should. On being requested to drink some water, he seemed to choke. The following day he had three violent spasms. The facial and throat muscles became tense, the corners of his mouth drew down and his head drawn back slightly. He could open his teeth hardly one-quarter of an inch, and his clothes and body were fairly drenched with perspiration. He complained between spasms of pain and tenderness in his neck and throat, and also of his tongue, which he had bitten during his attacks.

Ten c.c. of the antitetanic serum were injected hypodermically in the lumbar region; two hours later 10 c.c. more; two hours after that 20 c.c., and later 10 c.c., making 50 c.c. in twelve hours. This apparently controlled the severity and frequency of the attacks. The spasms were tonic in character, varying in length from fifteen seconds to three or four minutes, coming irregularly, sometimes at intervals of five, ten or fifteen minutes. On the second day he received 20 c.c. of the serum; on the third 40 c.c.; on the fourth day 30 c.c.; on the fifth, the last day it was used, he had 10 c.c., making fifteen injections of 10 c.c. each, 150 c.c. in all. The highest temperature recorded during the disease was at its onset, as above stated. After that it ranged between 99.4° and 101.4° . The pulse ran from 100 to 120 per minute, dropping on the seventh day abruptly to 70, when his temperature dropped to 97.6° .

On the second, third and fourth days the posterior cervical and dorsal muscles were affected. The only nourishment was milk. The first three or four days deglutition was difficult, but his teeth at no time were quite closed; the spasm in the throat was extremely painful, so much so that only when he became thirsty would he attempt to drink. On the night of the third day he had 10 grains of soda bromid every hour, four doses. It did not have any perceptible effect. This was the only drug administered during the whole course of the attack. Sixteen days after the onset of the attack he was entirely well.—*Adams, Phil. Med Jour.; Archiv. Pediatrics.*

DIAGNOSIS OF GONORRHEA IN WOMEN.

John G. Clark, in the *American Journal of the Medical Sciences* for April, 1900, gives a critical summary of the recent literature on gonorrhea in women. Regarding diagnosis, he says that the determining of this infection in women is much more difficult than in men, chiefly because a slight discharge may be considered more or less normal in women. The mere fact of such a discharge in the male is strong presumptive evidence of its specific origin. The certain diagnosis of gonorrhea in women depends very largely upon the demonstration of the gonococcus in the urethra. A profuse purulent ure-

thral discharge is quite as diagnostic as it is in men, but this acute urethritis is comparatively fleeting in character, and the disease may persist for months, and even years, after all these symptoms have disappeared. After the disease has become chronic, it may be possible to express a small quantity of purulent matter from the urethra or from the ducts of Bartholin's glands. A profuse yellowish discharge from the cervix is presumptive evidence in favor of this disease, but an opinion cannot be conclusively given unless the gonococcus is detected in the secretions.

In securing the pus for this examination, the greatest precaution should be observed not to have it contaminated by other organisms. The vaginal discharge for this purpose is almost valueless, as it has so many germs. That from the urethra, Bartholin's duct, or other concealed passages, gives the best results. The cervix should always be examined, the secretions being obtained while in the Sims posture, which permits of complete exposure of the cervix.

Methylene blue is employed in staining. The secretion is spread on a cover-glass or slide; it is then dried by passing it a few times over the flame of an alcohol lamp or gas-burner. The staining fluid is then dropped upon the slide and allowed to remain from one-half to one minute. It is then carefully washed in running water and dried with bibulous paper. To be certain of the diagnosis, the gonococcus must be found inside the pus cells. One examination is not sufficient to confirm negative results; the writer mentions one case in which twelve examinations were made, on different days, before the gonococci were found.—*Medicine.*

MALARIAL HEMATURIA.

B. Smith, in giving the history of malarial hematuria, shows that the disease is not peculiar to the southern part of the United States, that it is not a new disease, but that it was well known to the ancient physicians. Malarial toxemia of long standing seems, as a rule, to be essential to its appearance. That malarial poison is specific admits of little doubt; there is no other known agent capable of producing the same morbid phenomena. The anatomic changes are described,

based upon autopsies. The blood is generally thin and watery; its serum is golden yellow, due to bile pigment, which imparts a yellow color to the different organs. The red blood corpuscles are greatly diminished in number, and are usually extremely pale, and some of them contain small pigment granules. Malarial hematuria does not manifest itself, as a rule, except in those who have been exposed to malarial influences for a long time. The attack is ushered in with a chill, or the first indication may be languor, faintness, pain in the back and limbs, headache and nausea. These symptoms are soon followed by a sensation of chilliness, and finally the chill is fully developed. Vomiting sets in at this stage, and soon becomes severe and distressing. The average duration of the chill is about one hour, and then it gradually gives way, the permanent feeling of warmth coming by degrees. The skin then becomes yellow, growing deeper as the disease progresses, and the color is uniform all over the body. The hematuria has come on in the cold stage, or very soon thereafter, in all the cases observed. The urine is of a muddy, brownish-red color, sometimes bright red, and often brown or greenish-black. Microscopic examination shows numerous cells from the kidneys, discolored by the coloring matter of the bile and blood, and large numbers of blood corpuscles, some unchanged, but most of them crenated and disintegrated. The reaction of the urine is acid. Death results from exhaustion, from total arrest of the renal functions, from sudden collapse, followed by prostration and coma.—*Gaillard's Medical Journal.*

OBSTETRICAL.

POPULAR SUPERSTITIONS RELATIVE TO MENSTRUATION.

Laurent (*Chronique Medicale*) does not entirely disbelieve in certain ideas, popular amongst women in different countries, relating to menstruation. In the sugar refineries in the North of France the female hands are actually kept out of the premises when the sugar is being boiled and also when it is

undergoing the process of cooling: The objection to women is that if one or more were menstruating the sugar would be blackened. A similar notion prevails in Cochin China in respect to the preparation of opium. Another doctrine, also common to Europe and Asia, is that the hands of a menstruating woman breaks objects of strength and toughness. Especially is this notion entertained in relation to stringed instruments. A performer on the double bass at a theatre in Paris declared that if his wife touched one cord of the instrument during her "period" it snapped at once. Two young women, excellent violinists, informed Laurent that they never played when menstruating, as the snapping of cords interfered greatly with the performance. One of these ladies admitted that she was extremely nervous and irritable at the period. Several much more credible phenomena have been reported, and clearly come under the head of neuroses. Young girls sometimes acquire an idea that their clothes stick to them at the period. Such a person gets nervous during the catamenia, and trying to pull off a tight glove fails, and then believes that it sticks to her. Since she thinks that the same must be the case with her clothes, she loses the power as well as the will to pull them off. Laurent observed this in two sisters. Their body linen did not stick to the skin through perspiration or any visible cause, but it could not be taken off during a "period" till a servant pushed her hand between it and the skin.

—*Indian Lancet.*

Editorials, Reviews, Etc.

PUBLISHER'S NOTICE.—The JOURNAL is published in monthly numbers of *Forty-eight pages*, at one dollar a year, to be always paid in advance.

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Business communications, remittances by mail, either by money-order, draft, or registered letter, should be addressed to the Business Manager, SAMUEL S. BRIGGS, M.D., Corner Summer and Union Streets, Nashville, Tenn.

All communications for the JOURNAL, Books for review, exchanges, etc., should be addressed to the EDITOR.

THE DIVISION OF FEES.

We are in receipt of the following letter addressed to the editor, requesting an expression of opinion on the subject matter. It gives us great pleasure to reproduce it and discuss it, as the question is one which frequently arises in arranging fees and causes many unnecessary misunderstandings:

SHALL THE SPECIALIST DIVIDE HIS FEES WITH THE GENERAL PRACTITIONER?*

BY EMERY LANPHEAR, M.D., PH.D., LL.D., ST. LOUIS, MO.

Formerly Professor of Surgery in the Kansas City Medical College and the St. Louis College of Physicians and Surgeons; Gynecologist to St. Joseph's Sanitarium, St. Louis.

When an attorney in a county-seat has a client in danger of the penitentiary, and hence in need of the very best counsel, it is customary for him to seek some eminent lawyer of a great city and request his aid. In so doing does he approach

* Extract from a paper read before the Missouri State Medical Association, May, 1900.

the distinguished gentleman and say: "I have a client accused of——, who is able to pay \$3000 for his acquittal; will you take the case with me for this sum, leaving me the gratification of having done my professional duty?" By no means! He plainly states: "My patron has \$3000 to spend for his defense; are you willing to take \$2000 of this to join me in securing justice for him?"

Arrangements of this kind are daily made in every large city. Does anyone ever suggest that the country attorney has been doing a dishonorable act in thus securing his city brother to do the major part of the work for \$2000, he retaining \$1000 for his services? Would a doctor, sued for \$100,000, regard such a transaction as disgraceful, unethical, objectionable, if thereby he were saved this sum?

But let the question be one of saving life instead of securing liberty or preventing financial loss—and how different it is!

If a country doctor has a patient with recurrent appendicitis (upon whom he might operate with success, but fears possible failure) with a prospective fee of \$600, must he—in order to be "ethical"—write to some city surgeon to come to his help, take all of the \$600, and leave him merely the satisfaction of a duty well performed, or possibly pay for a few visits at starvation rates? "Upon what meat doth this, our Cæsar, feed, that he hath grown so great?"

Why should not the country-doctor plainly say to the city specialist: "I have a patient with appendicitis who is able to pay \$600. Will you operate for \$400 and leave me \$200 for preparation, after treatment, etc.?" What would be wrong about this? Let Drs. Robt. T. Morris of New York, Burnside Foster of St Paul, who so vigorously maintain that division of the fee is unethical under any and all circumstances, point out what injustice would thereby be done to (a) the patient, (b) the attending physician, and (c) the eminent surgeon. Why should we not learn a few things from the methods of our most noted lawyers—men who are above suspicion as to unethical conduct? Have we not hitherto been too unmindful of the financial interests of ourselves and our professional brothers?

I maintain that the payment of a "commission" for all business simply "referred" to a specialist, or for mere consultations, is probably unethical—certainly demoralizing in tendency; but that division of the fee is perfectly honorable and right when the specialist and the general practitioner jointly share the work and the responsibility.

We thoroughly agree with Drs. Robt. T. Morris of New York and Burnside Foster of St. Paul, that the division of the fee is unethical under any and all circumstances, because it is unjust to the patient and unfair to the operator.

Why should not each tub stand on its own bottom? Why should the family physician—whether a country doctor or a city doctor—hesitate to claim remuneration from the patient for services rendered? The patient would expect to pay for the services of his family physician—as much so as for the services rendered by the trained nurse.

What reason is there for practicing deceit on the patient and his friends by making them believe that the operator is charging an exorbitant price and the family physician is giving his services away?

Generally the attending physician calls in a specialist in order that the patient may have the advantage of attention he himself is not prepared to give; and if the patient is guided in his choice by the family physician it would be a gross injustice to abuse his confidence by robbing him as suggested in the above letter. The attending physician would do himself an injustice in undervaluing his services by apparently not charging for them. The eminent surgeon would do himself injury, even if he had no conscience, by getting the reputation of robbing his patient, when in reality he may receive only a moderate fee.

The writer of the above letter errs in turning to the much-abused legal profession for his illustrations.

We are unable to distinguish between division of fee and

the payment of commission. Both serve the purpose of stimulating trade and creating unwholesome competition. The attending physician who would seek a division of fees will try to influence his patient to go to the one who offers the biggest slice, having little regard for his fitness for the work to be done, and thus stimulate the reprehensible practice of underbidding now in existence.

MIDDLE TENNESSEE MEDICAL ASSOCIATION.

The twelfth regular meeting of this Association was held in the city of Columbia, May 17 and 18 ult. The attendance, which thoroughly represented the middle section of the State, was very gratifying to the enthusiastic workers of this body.

The following gentlemen were elected to membership during this meeting: Drs. W. F. Glenn, J. W. Handly, P. Bromberg and C. A. Robertson, Nashville; Frank Trester Smith, Chattanooga; C. C. Hardison, Lewisburg; C. C. Butler, Pulaski; A. W. Deane, Buford's; J. A. Edwards, O. J. Porter, J. H. Wilkes, Columbia; C. Y. Clarke, Mt. Pleasant; G. W. Oliver, Groveland; E. A. Timmins, Godwin; M. B. Smiser, Culleoka.

The visiting members included Drs. J. B. Cowan, Tullahoma; D. B. Cliffe, Sr., D. B. Cliffe, Jr., K. S. Howlett, Franklin; Reginald Stonestreet, Flat Rock; E. W. Ridings, Dickson; J. K. P. Blackburn, Lynnville; A. M. Allen, Buford's; S. T. Hardison, C. C. Hardison, W. A. McCord, Lewisburg; M. C. McGannon, G. C. Savage, Geo. H. Price, J. S. Cain, R. E. Fort, W. D. Haggard, Jr., L. B. Graddy, A. B. Cooke, Nashville; J. B. Murfree, E. H. Jones, Murfreesboro; A. G. Binkley, Leiper's Fork; J. E. Mathis, Burns; K. L. Sutton, Centreville; J. A. Moores, Lilla May; C. V. Stephenson, Aetna; Garrett White, Chapel Hill.

The papers read and discussed at this meeting were as follows:

"Minor Injuries to the Eye," Dr. G. C. Savage, Nashville. Discussed by Drs. Price, Frank Trester Smith, and Graddy.

"Follicular Tonsillitis," Dr. J. S. Cain, Nashville. Discussed by Drs. Price, Glenn, Murfree, Binkley, Fort, Robertson, Stonestreet, Ragsdale and Cowan.

"Epilepsy, with Report of Cases," Dr. A. G. Binkley, Leiper's Fork. Discussed by Drs. White, Cain, Mathis, Howlett, McGannon, Williamson, Savage, Edwards, Wilkes, Graddy, Cowan, Robertson, Price, Fort, and Stonestreet.

"Obstipation and Its Treatment," Dr. A. B. Cooke, Nashville. Discussed by Drs. Perry, C. C. Hardison, Glenn, Chin, and Savage.

"Common Sequelæ of Gonorrhea," Dr. W. Frank Glenn, Nashville. Report of a Case, Dr. C. A. Robertson, Nashville. Discussed jointly by Drs. Handley, Porter, Ragsdale, Price, Fort, Cain, Cowan, McGannon and Stonestreet.

"Small-Pox, with Notes on the Epidemic in Maury County," Dr. O. J. Porter, Columbia. Discussed by Drs. Cain, Harrison, Ragsdale, Cowan, Mathis, Robertson, Jones, Sutton, Fort, Pillow, W. K. Sheddan, Murfree and Wilkes.

"Mesmerism or Magnetism." Dr. J. A. Moores, Lilla May. Discussed by Drs. Stephenson, Cowan, Robertson, Mathis and McGannon.

"Empyema," Dr. Reginald Stonestreet, Flat Rock. Discussed by Drs. Ridings, Porter, Murfree, Fort, Ragsdale and Haggard, Jr.

"Pseudo Angina Pectoris Due to Excessive Cigarette Smoking," Dr. E. W. Ridings, Dickson. Discussed by Dr. Ragsdale.

"Report of Cases," Dr. R. E. Fort, Nashville. Discussed

by Drs. Haggard, Jr., McGannon, White, Stonestreet, Cliffe, Jr., W. K. Sheddan, Price and Cowan.

"A Two-Weeks' Experience of Malignant Disease," Dr. M. C. McGannon, Nashville. Discussed by Drs. Murfree, Porter, Hardison and Cowan.

Dr. L. B. Graddy exhibited some improved ear instruments and explained their application. Drs. Robertson and Price discussed the instruments shown.

Dr. W. D. Haggard's paper on "The Diagnosis of Appendicitis" was discussed by Drs. Fort, McGannon, Robertson, and Cliffe, Jr.

The following papers on the program were passed over for lack of time:

"Little Things in Obstetrics," Dr. S. T. Hardison, Lewisburg.

"Some Old-Time Remedies and Their Application," Dr. D. B. Cliffe, Jr., Franklin.

"Hepatitis," Dr. W. A. McCord, Lewisburg.

"Dysmenorrhea," Dr. J. B. Cowan, Tullahoma.

"Some Common Diseases of the Throat," Dr. Geo. H. Price, Nashville.

Dr. W. K. Sheddan's presidential address was, by resolution, ordered to be forwarded to the *Journal of the American Medical Association* with a request by the Society that it be published in that journal.

The Secretary was instructed to file with the Secretary of the Medical Society of the State of Tennessee a copy of the constitution and a list of all members in good standing, thus effecting its affiliation with that body and securing for the Middle Tennessee Medical Association the right of representation in the American Medical Association.

Pulaski was selected as the next place of meeting. The next meeting—the thirteenth—will be held in that city Nov. 15 and 16, 1900.

The following officers were elected for the ensuing year :

President—Dr. Geo H. Price, Nashville.

Vice-President—Dr. K. S. Howlett, Franklin.

Secretary and Treasurer—Dr. Paul Clements, Cross Bridge.

President Price has appointed the following committees for the coming meeting:

Arrangements.—Drs. C. A. Abernathy, C. C. Abernathy, W. E. Wilson, G. D. Butler, Pulaski ; J. K. P. Blackburn, Lynnville.

Essays and Discussions.—Drs. S. T. Hardison, Lewisburg ; A. J. Swaney, Gallatin ; F. B. Reagor, Shelbyville ; C. A. Robertson, W. F. Glenn, Nashville ; L. B. McWhorter, Cowan ; W. J. Jolly, McMinnville.

Credentials and New Members.—Drs. W. F. Abernathy, Pulaski ; C. N Cowden, Petersburg ; J. A. Moores, Lilla May.

Complaints and Offenses.—Drs. G. C. Savage, Nashville ; J. H. Wilkes, Columbia ; D. B. Cliffe, Sr., Franklin ; S. S. Crockett, Nashville ; A. B. Ramsey, McMinnville ; W. D. Sumpter, Nashville ; S. D Thach, Decherd ; J. S. Nowlin, Shelbyville.

BOOK NOTICES.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; One-Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Higiene de Madrid; Author of "A Text-Book of Practical Diagnosis," etc. Eighth Edition, Enlarged, Thoroughly Revised and Largely Rewritten. Illustrated with 37 Engravings and Three-Colored Plates. LEA BROTHERS & CO., Philadelphia and New York. 1900.

The rapidity with which the successive editions of this valuable publication attests in the most unmistakable manner the wonderful popularity of the book. Each edition has been carefully revised, enlarged, and in many ways improved, until as a book for ready reference it is almost without a peer. The plan upon which the work is built is of itself a recommendation. Many therapeutic facts of value have been added in this edition, and the full merits of new drugs tested by several years of experience have been carefully estimated and fully set forth. It is a work that will certainly please the busy practitioner, as it is concise yet exhaustive, and furnishes an incredibly large amount of information in a small space.

NORMAL HISTOLOGY. By EDWARD K. DUNHAM, Ph.B., M.D., Professor of General Pathology, Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. Second Edition. Illustrated with 224 Engravings. LEA BROTHERS & Co. New York and Philadelphia. 1900.

This, the second edition of a valuable book is one of great importance to students. The author's arrangement and clas-

sification of the subject is the result of years of teaching and careful thought and study. It is an excellent hand-book.

FOOD FOR THE SICK AND HOW TO PREPARE IT. With a Chapter on Food for the Baby. By EDWIN CHARLES FRENCH, M.D. JOHN P. MORTON CO., Louisville, 1900.

We don't know of a work that should be of more service to the physician than this. It is intended to make clear to the practitioner the proper kind of food for the sick—a subject too often neglected. The text is arranged upon such lines as to render it easily understood and perfectly accessible. The chapter on baby food is excellent, and adds materially to the value of the book.

THE TREATMENT OF FRACTURES. By CHARLES LOCKE SCUDDER, M. D., Surgeon to the Massachusetts General Hospital, Out-Patient Department; Assistant in Clinical and Operative Surgery in the Harvard Medical School. Assisted by FREDERIC J. COTTON, M.D. With 585 Illustrations. Philadelphia: W. B. SAUNDERS, 925 Walnut street, 1900.

The plan and the execution of this work are calculated to make it a popular book with physicians. The author's idea is to simplify the treatment of fractures, and no doubt he has succeeded admirably in carrying it out. The work is copiously illustrated with creditable cuts and diagrams, and the text is clear and concise. It is an excellent guide. Mechanical simplicity in the treatment of fractures is advocated. The author uses the terms "closed" and "open" fractures in place of the old terms, "simple" and "compound"—an innovation which we think is commendable. We are pleased with the work, and regard it as a valuable addition to the surgical literature of the present day.

ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By CHARLES E. DE M. SAJOUS, M.D., and 100 Associate Editors; assisted by Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. Vol. V. Philadelphia, New York, Chicago: THE F. A. DAVIS Co., publishers, 1900.

The fifth volume of this series takes rank with its predecessors as a valuable contribution to medical literature.

Every subject in medicine is dealt with, and all the new discoveries and additions to medical science are critically reviewed and carefully estimated. The work of preparation has been well done, and possess in this volume well-considered reviews upon everything new in medicine.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By Leading Authorities Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes—Vol. XIX, Malaria and Micro-Organisms. New York: WILLIAM WOOD & Co., 1900.

This entire Vol. XIX of this most important series is the work of four authors, and is devoted entirely to the consideration of Malaria. The knowledge of the malarial parasite up to within a recent period, was a matter of conjecture and hypothesis, but has by late discoveries been wonderfully developed, so that the whole subject is presented in an entirely new form. We consider this volume one of the most important of this entire series, and feel sure that it will take rank among the classic productions in the medical literature of recent years. We again take pleasure in commending this encyclopedic work, which in itself is a complete library.

Publishers' Department.

THE preparations of Pepsin manufactured by the Robinson-Pettet Co. are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufactuaing house in this issue.

BROMIDIA IN THE TREATMENT OF EPILEPSY.—The *New Albany Medical Journal* for November, 1898, contains an article on "Epilepsy Treated by the Use of Bromidia," by T. Edward Converse, M.D., of Louisville, Ky., which, after discussing the use of medicines chiefly relied upon in the treatment of that disease, and giving the needful hygienic measures in considerable detail, concludes by referring to "the question often raised: How long will the patient have to keep up the treatment? If the bromides are given, they should be continued for at least two years after the last convulsion, or if combined with the chloral hydrate in the form of bromidia, a year and a half is sufficient in most cases. If the patient is having several attacks during the day, a teaspoonful of bromidia after the attack and repeated in an hour will abort the next attack; but, as a rule, one teaspoonful will be sufficient.—*Sanitarium*, April, 1899.

THE ACUTE STAGE OF ENDOMETRITIS.—In the May issue of the *International Journal of Surgery*, Prof. Ralph Waldo, in speaking of the use of the curette in the acute condition of endometritis, says that "its use is not only not indicated, but

in many instances would do positive harm during the acute stage of endometritis."

The congested and inflamed endometrium should be treated by local application, which will exert a soothing yet stimulating and healing effect. Micajah's Medicated Uterine Wafers are especially indicated in endometritis and diseases of the uterus and its appendages. As a remedy in the treatment of diseases of women they have stood the test of time, and are recommended and used by many leading men of the medical profession.

URIC ACID AND HEADACHES.—A physician who has been experimenting to discover, if possible, a relation between headaches and the retention of uric acid, found experimentally that he could produce a headache in himself by adopting a diet of meat and cheese—foods which are highly nitrogenous and, in their burning up, produce a great deal of uric acid. He found in himself an excessive excretion of uric acid during headache, which, perhaps, means that a headache is a sign of nature's effort to relieve the system of a poison that would do worse than produce headaches were it permitted to remain. Such a headachy condition is comparable to the fevers which the human system often establishes for the purpose of ridding itself of disturbing impurities, and can best be overcome by the timely administration of Laxative Antikamnia and Quinine Tablets.

KEEP TAB ON TIME.—Believing thoroughly that "a thing of beauty is a joy forever," and that an article of beauty and utility combined is worthy of preservation, the New York Pharmaceutical Association has prepared for distribution to the medical profession a handsome and artistic *perpetual* calendar, which is now ready for mailing. Instead of presenting a calendar at the beginning of the year, according to the usual custom, the above company prefers the season when the physician is not deluged with all sorts and conditions of chronological recorders and is thus better enabled to welcome and appreciate such an addition to his office. The new Lactopeptine Perpetual Calendar is not intended for hanging upon the

wall, but to stand upon the doctor's desk ; and for this reason has a strong easel back to support it. The coloring is exceedingly soft and attractive, consisting of delicate shades of lavender, purple, crushed strawberry and buff yellow. The few words relative to Lactopeptine are entirely unobtrusive, and do not interfere in the least with the general artistic effect. In the near foreground on either side are two gracefully-draped female figure with flowing hair; around the edges appear the various signs of the zodiac.

One of these calendars will be sent to any physician requesting it.

SUBSTITUTION—CAUSE AND EFFECT.—An unsuccessful preparation or one which has not gained popularity with the physician is never substituted. It is only those articles which through their merit won the esteem and confidence of the medical profession and have demonstrated their therapeutic value which suffer from this evil. Take, for instance, Micajah's Medicated Uterine Wafers, which have stood the test of time and have proven their worth to the doctor as a remedy of exceptional value in the treatment of diseases of women. This preparation was the first local application presented to the profession in the form of a wafer, and should be given the credit for this original and novel form. Solely through merit it has become immensely popular, and, as a consequence, it is most extensively substituted. Therefore, we wish to call our reader's attention to the necessity of carefully specifying "Micajah's Medicated Uterine Wafers" on their prescriptions, and insisting upon the same being dispensed, and to the danger of a substitute being foisted upon their patients. Do not be led astray by similar sounding names. To insure results and protect your patient, care should be taken to prescribe the original preparation.

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